Lyman Chalkley Jr.
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INVENTIONS AND PATENTS

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AND
PATENTS

THEIR DEVELOPMENT AND PROMOTION

BY

MILTON WRIGHT, LL.B.

Associate Editor of the Scientific American; Member of the New York Bar

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PREFACE

Here in America there is something in the air which makes for invention. A man will grow to middle age in some foreign land without ever adding a single constructive idea to industry. Then he will migrate to this country. Within a year, as like as not, we find him knocking at the doors of the Patent Office.

Ours is the land of invention. It is said that more than three-fourths of the industrial wealth of the nation is founded directly or indirectly upon patent rights. The same might be said of the individual wealth of our citizens. Everywhere we turn we see inventions—patented inventions. They enter into everything that we have and everything that we do. We cannot eat, drink, sleep, dress, work, or play without adding to the profits flowing to a host of inventions.

Small wonder, then, that men and women in every walk of life, in every corner of the land, turn to this limitless source of wealth. With little things or great ones, with revolutionary changes or logical developments, with ideas sound or unsound they seek to gather their share of this stream of fortune pouring out in ever-increasing volume to the creators of something new.

The man who conceives an invention has before him a vision of rewards, but much must be done before that vision becomes a reality. There are patent rights to be secured, pitfalls to be avoided, business opportunities to be sought and handled in certain ways. It is a long, winding road the inventor must travel. To guide him on his way this book has been prepared.

MILTON WRIGHT.

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INVENTIONS AND PATENTS

CHAPTER I

THE FIELD FOR INVENTION

Years ago, so the story runs, a clerk in the Patent Office resigned. When asked why, he replied;

"I want to be on the safe side. Nearly all the inventions that are possible have been invented. Soon there will be no more, and this office will have to close. I want to get into something else now while I have the opportunity."

Since that time inventors and inventions have gone ahead in ever-increasing numbers. Soon the first half-millionth patent was passed, then the millionth, then the one and a half millionth. And the significant part about the increase is this: patent number 500000 was reached in 1893; patent No. 1000000 was reached in 1911; patent No. 1500000 was reached in 1924. In other words, it took fifty-seven years (from 1836 to 1893) to produce the first 500,000, eighteen years to produce the second, and only thirteen years to produce the third. Nearly every year has marked a substantial increase over the year preceding in patents for new inventions.

When will the limit be reached? With equal reason one might ask, "How high is up?" There is no limit. As long as men continue to think and work and add to their knowledge, just so long will they be producing inventions. The field for invention is without bounds.

In the United States today there are said to be at least 50 patents which yield more than a $1,000,000 a year, 300 which yield more than $500,000, 500 to 800 which yield from $250,000 to $500,000, and 15,000 to 20,000 which yield more than $100,000 a year. Many thousands produce for their owners fortunes far larger than they could ever hope to earn in sala-

ries or wages. Thousands more are sold outright for thousands of dollars.

And why not? Eighty-five per cent of the industrial wealth of our country is based directly or indirectly upon patent rights. The *Saturday Evening Post* said some time ago in an editorial:

> The annual output of all the gold, silver, and diamond mines in the world does not equal in value the yearly profits derived from American inventions. This is one reason why the subject of patents holds a decided fascination for the average person. Almost everyone is familiar with the life stories of Edison, Bell, and other great American inventors whose experimental work has made them famous.
>
> A lot of folks know that the inventor of a rubber button for garter fasteners earned more than a million dollars. The originator of a new insulating material also received more than a million dollars from the exclusive right to handle this material in only one country. Another man designed a new style for suspenders and netted half a million dollars in profits. The designer of a new style of shoe lace received more than two million dollars as a reward for his ingenuity, while a college professor received several hundred thousand dollars for his improvements in telephone apparatus. Large fortunes were obtained by the inventors of a collar button that turns down at the back, a steel pen for shading drawings, a new method for boiling sugar, and hundreds of other new ideas and useful devices.

And all these have come about since the day the pessimistic clerk in the Patent Office threw up his job. To gain some idea of the breadth of the field for invention and the rewards awaiting those who cultivate it, let us run over a list of some successful inventors whose flashes of genius plus hard work produced excellent financial results.

There was a young insurance collector named Lewis Waterman. He used a fountain pen, but like all of the fountain pens in use at that time it either poured down a lot of ink or none at all. One day he was making out a policy for a good prospect, but his crude pen gushed down a huge splotch of ink and ruined the half-made policy. He started to make out another, but before he could complete it the prospect changed his mind. After cursing all fountain pens, Waterman decided to invent a

good one. It was not many years before his invention made several million dollars for him.

A farmer named Joseph Glidden got the notion that his fence did not give adequate protection to his fields from wandering cattle. He decided to use wire with short pieces of sharply cut wire twisted on it at intervals. His barbed-wire invention made $1,000,000 for him. Later he invented a new type of farm gate; within two years it showed him a profit of $150,000.

William Gillette devised a safety razor with replaceable blades. His profits are said to have been $2,500,000 a year for several years.

B. F. Sturtevant devised a wooden shoe peg. It is said to have made $6,000,000 for him.

Hyman Lipman put a rubber tip on a lead pencil and made $100,000.

A Pennsylvania Quaker's son, William Painter, saw the need for substituting for a cork something that would keep bottles sealed inexpensively. Every beverage manufacturer adopted his tin-capped bottle, and he reaped a fortune.

A farmer's boy found it tiresome work to bend over so far each time he scooped up a shovelful in loading a wagon. The shovel's handle was too short. He put a long handle on the shovel, took out a patent, and made more money than he would have had he owned a hundred farms.

Fifteen million dollars were made by the man who invented the spring-wire stopper for bottles and jars.

A man devised a snap fastener for gloves. In one year he paid $29,000 income tax.

The man who devised the autographic attachment for the kodak sold his patent to the Eastman Kodak Company for $300,000.

The man who invented the dime savings bank became independently wealthy.

A man made a three-wheeled cart for his three-year-old son. As the famous Kiddie Kar it earned more than a million dollars in six years.

And so we might go on listing inventions which made money for the inventors. Their success was made possible not alone

by the fact that the inventors had faith in their possibilities, but also by the fact that others saw that there still was room for new things in the world—still room for huge profits from new ideas. These others shared in the benefits.

Thus Samuel Kischbaum, a tailor, is said to have put $120, his life savings, into the DeLong Hook and Eye. Within a few years he received $12,000.

A man who bought a $250 interest in the Ford Motor Company received $250,000 as his first cash dividend.

A corporation lawyer in Chicago advised a wealthy lumberman not to invest in the Mergenthaler Linotype Company. The lawyer's stenographer, however, did invest, and her dividends are said to have amounted to more than a quarter of a million dollars. When a fire razed the lumber yards and swept away the lumberman's fortune, the lumberman married the lawyer's stenographer.

A plumber, Jeremiah Geary, sold his shop and invested the proceeds, $600, in the Welsbach Gas Mantle and went to work for the man who bought the shop. It is said that his investment paid him more than $500,000.

All of these fortunes, of course, were enjoyed because of the excellent business judgment with which the respective industries were administered, but they were all founded upon inventions. They give but a fragmentary idea of the extent of the field for inventions.

In whatever line of industry you may happen to find yourself there exists an opportunity for invention, no matter how far removed it may seem from things leading to a patent monopoly. Wherever there is a condition less than ideal there is room for improvement—for invention.

The grocery business is an illustration. In St. Paul, Minn., a few years ago lived an enterprising grocer. His was a cash-and-carry store. His customers bought fairly liberally; on Saturdays they would carry away with them about all the packages and bundles they could hold in their arms. Many times, if they had been able to carry more, they would have bought more. There was his opportunity—to provide means for enabling customers to carry away more goods.

Over and over he turned the problem in his mind, and at last he hit upon the solution. He took a paper sack, punched four holes in each side, two near the bottom and two near the top, and passed a length of wrapping cord through the holes. The merit of the device lay in the fact that all the weight was borne by the portion of the cord passing under the bottom of the bag. A shopper could carry all the groceries the bag would hold, up to seventy-five pounds, without tearing the paper.

The grocer realized that his field for profit lay far beyond the confines of his own store. He applied for a patent, and in a little corner of his warehouse he began making his bags for other storekeepers. In three years he was employing 125 workers and using 25,000 square feet of factory space. His first order was from a St. Paul wholesale grocery house. In a few years his output was 10,000,000 bags a year. Not long ago a single order for more than one million shopping bags came from a chain of five-and-ten-cent stores. He has taken out patents in numerous foreign countries and orders have come to him from all parts of the world.

From time to time we read of lists of "Inventions Wanted." One of the most interesting of these was started by Sir William Bull in England. He started what he called a "What's Wanted" book as a collection of suggestions for things to be invented, he himself contributing the first fifteen. A similar collection has been adopted in this country by the magazine *Popular Science.*

Among the suggestions in the English and American books are such things as the following:

A method of storing the sun's heat in summer and releasing it in winter.
A typewriter that will spell correctly.
A process to take the ink out of newspapers so they can be used again.
A portable device to record dictation.
A cheap and effective means of preserving book bindings.
A device to slow down automatically a motor car when it passes a certain speed.
Warm winter shoes that will not slip.
Detachable spiked soles for icy pavements.
A mask to protect the face from the cold.

Colored X-ray pictures.
Heatless electric lights.
Hammer heads that won't fly off.
Untarnishable silverware.
Enamel that will not chip off plumbing fixtures.
A flexible but unbreakable string for necklaces.
Automobile headlights which will illuminate the roadway but not dazzle approaching drivers.
An electric fan that will swing in a complete circle.
Something to hold a nail so the user won't hammer his fingers.
A noiseless airplane motor.
A dandelion exterminator.
A readily cleanable pipe.
A method of preventing rust.
Flexible glass.
A new game.
A smooth road that will not get slippery when it rains.
A treatment of woolen goods to make them unshrinkable.

Some things which already are invented get on such lists. For example, one of the items listed is a method of closing window shutters from the inside of a room without opening the window. In looking over some old Patent Office models not long ago I came across just such a device. It had been patented half a century ago. Another thing suggested for invention is a method of keeping a piece of bread in an electric toaster from being burned after it has been toasted sufficiently. Thousands of quick-lunch counters are equipped with such a device, but the man who put it on the list probably was not aware of it.

Such lists are interesting, but the probabilities are that their value as a guide to the inventor is not great. They do serve, however, to give an impression of the wide range for invention over which inventors may roam. Such lists, too, are often used by patent attorneys advertising for clients. In effect, such attorneys say: "This is a list of inventions wanted. Just invent some simple little device along this or any other line, let me secure a patent for you, and your fortune is made." The chief value of a list of "inventions wanted" in a case like that is to warn you not to take too seriously the claims of the attorney using the list as propaganda.

At times, organizations or associations will offer prizes for the best invention along a particular line or for the best solution of a particular problem. Thus the English Society of Mechanical Engineers offered $5,000 for a superior machine to test hardness of metals. The American Humane Society announced a prize of $1,000 awaiting the inventor of a horseshoe which would prevent horses from slipping.

Prizes of this sort offered from time to time are only a small fraction of the rewards awaiting inventions for which a definite request has been made. The great volume of suggestions for inventions comes from manufacturers seeking new markets or new uses to keep their factory wheels turning. The prizes they hold out are the purchases or leases of the patents covering the invented devices or processes.

While this book was being written the author, as associate editor of the *Scientific American*, inserted the following brief notice in that magazine:

We Offer Our Services

From time to time inventors and patentees write to the *Scientific American* asking to be put in touch with manufacturers looking for inventions. Likewise, manufacturers from time to time ask us to inform them of inventions suited to their facilities and their market. It is a pleasure for us to bring manufacturers and inventors together when the meeting will be to their mutual advantage.

In those cases we have been of service because one of the parties asked us to. Doubtless, there have been other cases when we could have brought inventor and manufacturer together, had either of them requested us to do so. The fault is ours; we should have extended an invitation.

We have now started two files, one listing manufacturers who desire inventions along specific lines, and one listing inventions whose inventors are seeking manufacturers. Any reader of the *Scientific American* may record an invention or a need for an invention. When a listed invention meets a listed need we shall notify both parties. There will, of course, be no charge for this service.

As was to be expected, a large number of inventors wrote to the magazine, sending copies of their patents or descriptions of their inventions and asking to be put in touch with manu-

facturers. There also, however, were numerous manufacturers—frankly, considerably more than the writer had expected—who wrote asking to be put in touch with practical inventions along the lines of their manufactures.

One man walked into the office, saying:

I have $25,000 to invest. I should like to put the money into some new invention that looks promising. What one do you know about that you would recommend?

Most of the men looking for inventions, however, were more specific. Following are a few samples of their requests:

One of our clients is a large manufacturer of children's vehicles, nursery toys, and juvenile furniture made of wood. They are constantly seeking new items for their line.

Should you come in contact with any individual or company bringing out a new item along these lines, the patentee of which is not financially able to manufacture and market it on a large scale, we should appreciate your having them communicate with us. If their items are suitable, our client will be glad to make a satisfactory royalty arrangement or make an outright purchase of the patent rights.

This company has been in business for about twenty-five years, and we manufacture approximately $2,000,000 worth of lamps per year. We wish to extend our business activities to other lines, preferably along lines not too far removed from lamp making. However, we are willing to listen to any sound proposition and are prepared to finance one which will suit our needs.

As per your January edition, page 76, "We Offer Our Services," the writer is taking the liberty of asking if you can put him in touch with anyone that might be able to submit a method or process that will keep eggs in good condition for a period of four to six months. Must be something different from cold storage or water glass. If the method used is in a form of a coating, the material must be colorless so as not to change the original appearance of the egg and the coating to disappear immediately when egg is put in water.

We are in a position to use and would like to obtain patents of value on textile machinery for cotton. Our equipment is such that we can handle machinery of medium size up to 1,200 or 1,500 pounds

weight. We are not equipped to do pressed-metal work of any sort, although we handle quite a bit of sheet-metal work, using sheets up to $\frac{3}{16}$ inch thick.

We are equipped to manufacture all kinds of light metal stampings, making our principal product spectacle cases and jewelry from the raw materials to the finished product, entirely in our own factory. Our personnel has great experience in our line, most of them having spent their lives at this work.

To supplement our business of manufacturing library bookstacks, steel shelving, and grey-iron castings for the jobbing trade, we are desirous of developing the manufacture of some article that will require quantity production and can be made in our plant, which has facilities for manufacturing light grey iron castings, fabrication of light structural steel, punching and forming of sheet metal, light machining, and baked enameling. We would prefer not to take on the production of anything that will require us to develop additional selling facilities, and with that in view would rather work with some existing sales organization or one to be established.

These letters serve to illustrate the truth that industrial competition is in no small degree a matter of invention. Manufacturers of all kinds and degrees find it necessary constantly to adopt improvements to get monopolies of process or product, to find new things to keep their employees and the facilities busy, to hold their customers, to fight competitors. Some of the great corporations rely upon their own research and development departments. The General Electric Company has 300 highly paid research workers and inventors in its employ; the Westinghouse Company has a like number; the General Motors Company employs 800. Small companies rely upon outside inventors or upon men in their own organizations, who have other work to do and who devote only a part of their time to inventing.

So eager are industrial executives for new and better products and better processes that many industries are cooperating with each other and with the government. Upon cooperative research projects various industries are spending nearly $500,000 at the United States Bureau of Standards alone. This is effected under a "research

associate plan" whereby manufacturers place graduate physicists, chemists, or engineers at the Bureau for a period of a year or more to carry on investigation in some particular line. Higher standards, increased production, and less waste are resulting.

At first thought it might seem as though the more inventions that are made, the narrower becomes the field—the less inventions there are that can yet be produced. Such is not the fact. Paradoxical as it may seem, the more inventions which are given to the world, the more it is possible to give. When primitive man set out to adopt newly found principles of natural science to his convenience, there were relatively few things it was possible for him to invent.

The bow and arrow has been called man's greatest invention, because it was such a tremendous step forward, and because it meant a new world opening up before mankind. No longer would puny men be at the mercy of savage beasts, no longer would they be restricted in their food supply to such animals as they could slay in hand-to-hand conflicts. A mechanical invention had elevated the race to a position before impossible.

At that stage the bow and arrow were one of the few things that could be invented. The multitude of weapons of all kinds and descriptions since then have been possible only because the bow and arrow preceded them. As a basic invention it made possible countless other inventions, each of which, in turn, made still other inventions possible.

"If Adam and Eve had combined the fig leaf as a diaphragm, a pointed stick as a needle, and a plate of clay as a record, they could have had a phonograph in the Garden of Eden," a noted writer has said, trying to illustrate the truth of the old saying that "there is nothing new under the sun." "Given these three component parts, anyone of mechanical ability can record and reproduce sound."

Granted, and the knowledge of how it may be done is a step to still greater inventions of which the inventor of the phonograph had not dreamed.

Every invention carries within it the seeds of further inventions, not only because of the improvements which may be

made over the original invention, but because of the new knowledge which every invention gives to the public. In 1837, the first full year of the present patent system, there were 435 patents issued. At the present time there are nearly 50,000 patents issued every year. We might well say that today the field for invention is more than a hundred times as great as it was in 1837—that more than a hundred times as many inventions are possible.

Is it not possible, however, that inventions may catch up with knowledge, that science applied to industry may move up abreast of pure science, that we may use to their fullest and most ingenious extent all the principles we have learned, leaving nothing to invent? Some such thought was expressed by Herbert Hoover in 1926 when he launched a campaign to raise $20,000,000 to endow pure science research. Our knowledge must broaden—shall broaden—he declared, in order that industry may continue to grow. It was a noble appeal for research workers, made necessary largely by the fact that so many of the country's best scientific minds had turned from pure science to applying science to industry, which is but another way of saying to inventions. What better tribute could there be to the attraction of the field for invention and of its place in modern civilization?

In the field for invention there is room for any man with ideas and industry. Some there are in it with little ideas, some with great ones, some there are who through bad luck or lack of knowledge will cultivate the field in vain; some there are who will reap a golden harvest. But there the field is, bounded only by the limits of human imagination. The success or failure of any toiler in the field depends upon himself.

CHAPTER II

WHY GET A PATENT?

A manufacturer walked into the office of a patent attorney one day, dropped a square piece of asphalt compound on the desk, and said.

"Can you get me a patent on that?"

"I don't know. What is it?" countered the attorney.

"Floor covering."

"But haven't I seen something like this before?"

"Of course, you have. I've installed it in any number of buildings around here."

"How long have you been making this?"

"About seven years."

"Why are you thinking about a patent at this late date?"

"Well, it's this way. We originated this particular composition in our own factory. We had something none of our competitors had. They couldn't produce it because they didn't know how. We thought about a patent, naturally, but we figured that would be giving our secret away. If we took out a patent, somebody might infringe it, and then we would have to go to the trouble and expense of prosecuting for infringement. On the other hand, if we kept our secret, there could be no possibility of anybody using our method; they wouldn't know what it was."

"And now one of your competitors does know it, I suppose."

"Yes. One of our former workmen betrayed us."

"Can you prove that he did?"

"No, but we're morally certain of it. It was only a short while after he left us that our rival began putting out a flooring almost identical with ours. He has cut the price, and to meet him we have had to pare our margin of profit away down to nothing at all. It's not right. He has stolen our idea. We want protection."

"I'm sorry, but we can't help you. You admit your invention has been in public use seven years. Two years is the limit. You should have applied for a patent at least five years ago. You are not entitled to a patent now."

It was an old story—one which every patent attorney has heard many times. A man tries to keep his invention a secret, the secret leaks out, and then the inventor makes a belated and vain effort to secure a patent.

When you have perfected your invention you want to profit by it. Your profit arises through your having a monopoly. This you may secure by either of two methods—by secrecy or by a patent. There is something to be said for each method.

Should you elect to keep your process secret, you save the cost of securing a patent—$40 in government fees in addition to whatever your patent attorney charges for his services, a total cost ranging upward from $125, according to the scale of your attorney and the complexity of your invention.

Then, too, as the floor-covering manufacturer pointed out, you minimize the danger of having another imitate your process or your device as long as there is no way of his finding out just what it is. You have such monopoly as secrecy gives you, so long as you can keep your secret; while an invention which is patented becomes public property after seventeen years.

One serious objection to secrets, however, is that they have a way of leaking out, and, once they do, you have no protection. Few commercially successful inventions remain secret forever.

There is still greater objection to secrecy, however, and that is the possibility of an independent discovery or invention of the same process or device as yours. If you have solved some particular problem in some particular manner, it is not at all unlikely that someone else may work out the same solution you did. The mere fact that you arrived at the solution first is no protection in itself.

When you receive a patent, the facts about your invention are published for all the world to see. Without disclosing

what your invention is and what it accomplishes you cannot obtain a patent. The very word "patent" means something that is exposed.

Why then, when you have a valuable invention, should you obtain a patent, and thus publish the facts about it? Because what you seek to obtain through a patent is a monopoly, the right to exclude others from making and selling your invention. This exclusion necessarily must be clearly defined. The boundaries of your domain must be marked unmistakably, so that others may know where they may not trespass.

A patent is not a *natural* right. In the absence of special legislation any man has the right to make, use, and sell any article he desires, whether it is his own invention or something which some other man originated. This being the case, no man would derive any special benefit from his own invention, once the knowledge of it became public property. Naturally, in the absence of any other protection, men would keep secret as long as possible new devices and processes they had worked out.

Realizing the importance of inventions to the industrial progress of the country, the framers of the Constitution inserted Art. 1, Sec. 8, which gives to Congress the power

> . . . to promote the progress of Science and the useful arts, by securing for limited times to authors and inventors, the exclusive rights to their respective writings and discovers.

Upon this foundation the patent system has been erected. Its first consideration, bear in mind, is not the individual welfare of the inventor, but the welfare of the country as a whole. The inventor is considered to have produced something of public value, and to receive the benefits of that invention, the public, through its representative, the government, is willing to confer extraordinary privileges upon him. So highly have inventions been thought of, in fact, that in the early days of the Republic, each patent was signed personally by the President, the Secretary of State, and the Attorney General.

As patents grew more numerous it became necessary to establish a separate government bureau to handle them.

Various changes were made in the law until, in 1836, the patent system was put into effect which, without substantial modification, exists to this day. It has served as the model for the patent systems of nearly all the civilized nations of the world; upon it rests nearly all our industrial wealth.

The section of the statutes which provides for patents reads as follows:

> Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof, not known or used by others in this country before his invention thereof, and not patented or described in any printed publication in this country or any foreign country, before his invention or discovery thereof, or more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceedings had, obtain a patent therefor.

A patent is a contract. There are two parties to it. You, the inventor, are one. The other is the public, represented by the government. By the terms of the contract each of you gives something. You give the facts about your invention to the public. The public, through the government, gives to you for a period of years the right to exclude anyone from making or selling your invention. At the end of the term of years your exclusive rights to your invention cease; it becomes public property. Only by special act of Congress can your patent be renewed, and Congress almost never grants a renewal.

Patents are granted upon four kinds of things: arts, machines, or articles of manufacture, processes, compounds or compositions (usually chemical), designs.

For the first three classes the patent runs for seventeen years. For designs it runs for three and a half, seven, or fourteen years, according to the wishes of the applicant and the fee he pays. This is as it should be, for designs are more likely than other inventions to grow obsolete within a few years.

To be patentable it is not enough that your mechanical device, process, or whatever it is, be new. It must be the result of *invention*. The United States Supreme Court stated the rule clearly in the case of the Atlantic Works *vs.*

Brady, handing down a decision which has been a leading one ever since 1883, and saying:

The process of development in manufactures creates a constant demand for new appliances, which the skill of ordinary head workmen and engineers is generally adequate to devise, and which, indeed, are the natural and proper outgrowth of such development. To grant to a single party a monopoly of every slight advance made, except where the exercise of invention somewhat above ordinary mechanical or engineering skill is distinctly shown, is unjust in principle and injurious in its consequences.

The design of the patent laws is to reward those who make some substantial discovery or invention which adds to our knowledge and marks a step in advance in the useful arts. It was never the object of these laws to grant a monopoly for every trifling device, for every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures.

While it is clear that what you seek to patent must show invention—creation rather than development—the question of whether your particular work amounts to invention within the meaning of the law may not be so clear. As the Circuit Court of Appeals held years later in the case of the Union Carbide Company *vs.* the American Carbide Company:

In determining the question of patentable novelty, there can be no hard and fast rule. Each case must be decided upon its own facts. Mere change of form in and of itself does not disclose novelty. A new article of commerce is not necessarily a new article patentable as such. But patentable novelty in a case like the present may be founded upon superior efficiency; upon superior durability including the ability to retain a permanent form when exposed to the atmosphere; upon a lesser tendency to breakage and loss; upon purity, and, in connection with other things, upon comparative cheapness.

Is the device you have worked out an invention? That is a first question for you to consider in seeking some form of protection for it, for if it is not invention it is not patentable. Mere mechanical skill is not invention. A watchmaker, we will say, is faced with the problem of making a watch which will go into a smaller case than heretofore has been used and

which will still maintain the proper value between the rates of revolution of the minute and hour hands. He works it out by placing the various wheels in different positions. That would not amount to invention if the same way of solving the problem would be likely to be worked out by any skilled mechanic who had the same job to do.

Suppose, however, that rearranging the various parts would involve a reorganization of the works of the watch, and would tend to change or simplify its whole operation. That might well be more than the average skilled watchmaker would be likely to do. It might well, therefore, constitute invention, and as such be patentable.

Whether or not a new article or process constitutes invention is a matter upon which the courts often disagree with the Patent Office and with each other. While the rule is a simple one, its application often is difficult, and the inventor cannot be blamed if at times he is at a loss to know what status the law would give to his brain child.

There is still another requirement, which, fortunately, falls much more lightly upon the inventor's shoulders, and that is that the invention must be useful. The courts construe "useful" to mean operable. If your invention works, even though its purpose might seem frivolous, it is patentable. You could obtain a patent for a toy.

An invention, however, whose purpose is vicious or against public policy cannot be patented. Thus, an invention which is essentially a gambling device cannot be patented.

Your idea may constitute an invention, and it may be useful within the meaning of the law, but is it *new?* If not, you cannot get a patent. And how are you to determine this question of novelty? There is no way you can ascertain with certainty that your invention is new without filing an application and prosecuting it through the Patent Office. If your invention is not new, however, you may be able to ascertain that fact by having an inexpensive preliminary search made of the Patent Office records to find any United States patents upon inventions so nearly like yours as to make it inadvisable to proceed further.

Complete information, however, is not provided by such a preliminary examination or search. You do not find foreign patents or pending applications, which are in the confidential files. Neither do you discover published articles about inventions or discoveries, which might act as a bar to your application. Also, there is always the possibility that in a preliminary examination patents may be overlooked which will come to light later when the patent application is pending, for the Patent Office classifications are constantly undergoing revision, and frequently certain subclasses of patents temporarily are unavailable for search.

Some patent attorneys are inclined to discourage preliminary examinations because they are inconclusive. Others recommend them in all cases, because of the possibility that they may reveal prior patents. There is the further advantage to an inventor that a search may disclose other patents which are sufficiently different from his as not to preclude the possibility of a patent being obtained, but which give him a comprehensive picture of the state of the art and an idea of what competition his invention may have to meet when it is placed on the market.

CHAPTER III

CHOOSING A PATENT ATTORNEY

Rule 17 of the *Rules of Practice* in the United States Patent Office reads as follows:

> An applicant or an assignee of the entire interest may prosecute his own case, but he is advised, unless familiar with such matters, to employ a competent patent attorney, as the value of patents depends largely upon the skilful preparation of the specification and claims. The office cannot aid in the selection of an attorney.

There have been inventors who drew up, filed, and prosecuted their own applications for patents. Occasionally such a patent stands up under fire and is successful in a bitterly fought infringement suit. Such a one was the patent issued to George Campbell Carson, a gold miner, who patented a new type of furnace for smelting ore. When his invention was adopted by the biggest ore-reduction companies in the country he succeeded in interesting some wealthy men in his behalf, who financed him in damage suits for infringement. The best legal talent available was enlisted on his side, and after years of litigation his patent was held valid and infringed. The courts ordered an accounting for royalties due from the infringing companies. The amount due from the American Smelting and Refining Company was estimated to be $5,000,000. The royalties from other infringing companies brought the total up to $20,000,000.

But Carson's case is the exception which goes to prove the rule that unless an inventor is skilled in patent matters he should not attempt to prepare and prosecute his own application. In the celebrated case of Topliff *vs.* Topliff the United States Supreme Court had this to say about the necessity of drafting specifications and claims expertly:

The specifications and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy, and in view of the fact that valuable inventions are often placed in the hands of inexperienced persons to prepare such specifications and claims it is no matter of surprise that the latter frequently fail to describe with requisite certainty the exact invention of the patentee, and err either in claiming that which the patentee had not in fact invented, or in omitting some element which was a valuable or essential part of his actual invention.

Such emphasis on the expert handling of patent matters surely calls for the services of an attorney with specialized knowledge and experience.

While it is advisable to secure the services of a competent patent attorney, it is by no means suggested that all the thinking be left for the attorney to do. Just as the attorney can render his most efficient service when he understands thoroughly what the inventor is seeking to accomplish, so can the inventor be of help when he understands what the attorney is trying to do. By knowing something of patent matters and how they are handled you are not only likely to add to your knowledge of your own invention and the branch of industry to which it applies, but also you often may be able to make valuable suggestions which otherwise might not be incorporated in your patent papers. Not only that, but some knowledge of patent matters may give you a clue as to the degree of efficiency your patent attorney is exercising in handling your business.

There are as many kinds of patent attorneys as there are kinds of people, and the value of your patent may well depend upon the care with which you select your attorney. The Patent Office keeps a roster of attorneys upon which it enrols the names of all persons entitled to represent inventors or their assignees in the presentation and prosecution of applications for patents.

These representatives may be attorneys at law in good standing in any court of record of the United States or any state or territory. They may be citizens, not attorneys at

law, who file with the Patent Commissioner proof of good moral character and repute; who possess the necessary legal and technical qualifications to enable them to render applicants for patents valuable service; and who are otherwise competent to advise and assist them with their patent applications. Or they may be foreign patent attorneys in good standing in their own countries. Lastly, they may be firms composed of individual members all of whom are registered as patent attorneys. In special cases the Commissioner may recognize other persons as attorneys or agents to represent inventors in particular applications.

It should be noted in passing that a patent attorney is not necessarily an attorney at law. In fact, some of the most skilful of them have not been attorneys at law, a circumstance which, from time to time, has dulled the effect of agitation to pass legislation to make admission to the bar a necessary qualification for patent attorneys. The term "patent solicitor" probably would be more fitting, but inasmuch as "patent attorney" is the term most commonly used, it is used in this book. It is just as well to bear in mind, however, that as a patent attorney he practices before the Patent Office and nowhere else.

The partial resemblance of the patent attorney to the attorney at law has its effect upon the patent profession, especially in the matter of getting business. In the absence of other information this may serve as a guide in the selection of your patent attorney. Some patent attorneys look upon themselves as bound by all the traditions and canons which bind the legal profession; they would hold it unethical to advertise their services. The efforts of such attorneys are likely to be conscientious, and their fees are likely to be high.

There is a class of patent attorneys who carry on their business as they would any commercial enterprise. They advertise blatantly and skate as near as possible to the line of the Patent Office's disapproval in the manner in which they endeavor to attract clients. Their fees are likely to be attractive, but the quality of their service is often not of the highest order.

A third class steers a middle course, with conservative advertising amounting to little more than a card announcing the service they are prepared to render. Such advertising meets with the consent of the Patent Office. The work of these attorneys is generally efficient, and their fees are likely to be moderate.

Many inventors fear to trust a patent attorney, believing that he may steal their ideas. Such fear is seldom justified. An attorney may lack a conscience, just as a man in any other walk of life may lack one, but this lack manifests itself, usually, not in stealing your idea, but in the manner in which he seeks to get you for a client, in the slipshod methods with which he handles your affairs, or perhaps even in the fact that he handles your patent application at all, as would be the case if he were to put you to the expense of a patent application, knowing such an application never could eventuate in the issuance of a patent.

Unfortunately, not every organization which forces itself upon your attention and seeks to have you retain it has a legal right to prosecute a patent application. Unless you are on your guard you may find yourself tied up with an establishment which is not made up of registered patent attorneys and which will keep stringing you along for as long a time as it thinks it can keep drawing payments out of you.

An example of this sort of thing was brought out in testimony before the House of Representatives' Committee on Patents in a hearing on a bill to prevent fraud in practice before the Patent Office. Among others, a circular letter from an "institute of inventors" in New York City was spread upon the minutes. It read as follows:

Dear Sir:

We take pleasure in sending you herewith our booklet, which fully describes the benefits of being a member of this institute; as such we will help you develop, improve, finance, and market your inventions, which only such an association as the National Institute of Inventors, with its concentrated strength in the field of invention and its allied branches can give. Assistance is freely given to each member as the case may demand, and encouragement so rendered may cover

legal or financial aid, or it may embrace any one of one thousand and one things, that are hardships, often unsurmountable and well known in the experience of every inventive genius who stands alone and does not have the backing of such an association as ours.

As the ultimate object of every inventor is to sell his invention, we do everything possible that can be done in a brotherly, helpful way for our members, and the mighty object of it all is the banding together of inventors for mutual aid and protection on the age-old principle, "In union there is strength."

We have over 2,300 members and for the present the board of governors have made our annual dues $10. When you consider the great benefits derived from membership, is not this very reasonable? We trust that, while the opportunity is open for you to join at this small sum, you will send us your application. We require two references as to your character and honesty, as members exchange ideas for mutual betterment and improvement, making it necessary that the personnel of our members be maintained at a very high standard. If you can think of any reason why it is not to our mutual advantage that you should become a member of this institute, we would like to know about it.

In our booklet you will find a membership blank, and we trust most sincerely that you will realize the immense and undoubted value of becoming one of our members, and will send in your application today.

Not only was the foregoing alluring letter printed on good stationery, but it carried on the back the names of very prominent men and women as honorary members. The whole communication carried an aura of altruism, fraternity, and helpfulness. But how did it work out in practice? Following is the experience of an inventor, as told in his own words in a letter to his congressman:

About three years ago I engaged the National Institute of Inventors of New York to steer me through on a patent for the first silo feeding machine that ever was invented. It gathers the silage from the top surface of the silo and deposits it in the chute, thence to the ground, without climbing the ladder. (I mention this that you may realize the importance of it.) Power is applied at the base.

The Patent Office reported that I was the original inventor, and the institute reported that it was worth a huge sum of money.

Long, long ago, they reported that my patent had been allowed, and I have repeatedly asked them to forward the papers, but they have always evaded the subject. I've had to be very careful not to have them suspect I was discrediting their honesty, as they profess to be steering me through gratis, although I have been paying all costs, which is right, of course, and which have run up around $1,000 already. Some pull on a man who has to work to support his wee family, but we have all sacrificed on account of their assurance of sure victory.

Now, I confess I am curious as to why they have not forwarded same, and I have also some very peculiar correspondence from them to add to my curiosity. I hardly dared to take the matter up with the Patent Office, lest the institute get wind of it and get "peeved." All I want is a fair deal, and I may be getting it and not know it. But wouldn't it seem queer to you when, after three years, you had been sending what little money you could spare to them every month and after three years have nothing to show for it?

I beg of you to help me in this matter, if you please will spare time and effort, and get in touch with the Patent Office, find out if such a device was ever entered for patent, if patent was granted, when; if not, why not, and if anybody else has applied for same. Isn't it simply rude for me to ask so much of you, and yet I don't know how else to get the needed information without possibly getting my feet in it with the institute, as I hope it can be done without the office knowing I am after the information.

They have also led me into having them make me a model for same, and I have already forwarded them about $400 for it. Occasionally they would inform me they would have it ready soon, but "soon" is a long time coming. If I had my patent papers, I might not be so "curious" about the model, but no patent and no model after three years, and spending $1,500 makes a poor man "itchy."

Now, I know that your blood will get hot, too, if I tell you any more, for I know you are hard on grafters. I thank you.

The congressman took hold of the case with a will and saw it through. Eventually the patent was issued, but before that time the inventor died.

Upon the Patent Office roster of patent attorneys there are approximately 10,000 names. Many of these men practice

but seldom. The great bulk of the business entering the Patent Office comes from a small group of attorneys in the cities of Washington, Chicago, and New York, who advertise throughout the country for clients.

In addition to these there are men and organizations who hold themselves out as patent attorneys, but who are not registered as such. The Patent Commissioner has described one of these, saying:

> We have, out in St. Louis, a man who was disbarred, I think, ten years before I became Commissioner of Patents, and he has been practicing ever since as an attorney. How does he do it? He puts an advertisement in a local paper as a patent attorney. He does not say a registered patent attorney, but a patent attorney. He puts an advertisement in the telephone directory as a patent attorney, and a man off in Jefferson City will see his advertisement and write to this attorney in St. Louis to begin the operations.
>
> The attorney will get money, he will file an application, and he will file that application, of course, in the name of the inventor, because the inventor himself must swear to the papers. Then he says, "Honorable Commissioner of Patents, I, John Doe, a citizen of the United States and a resident of Jefferson City, in the State of Missouri, whose post-office address is 378 Arcade Building, St. Louis, Mo."—not Jefferson City—so that when the Patent Office has any communication to make to the inventor, instead of it going to Jefferson City, it goes to 378 Arcade Building, where this attorney is practicing, and only the Patent Office knows he is practicing as a disbarred attorney.

The qualifications of a good patent attorney are high. He must be able to understand your invention. He must have a sufficiently technical acquaintance with enough arts so that he can tell definitely what the scope and merit of your invention is. He must have enough literary ability to describe your invention accurately and adequately in technical language. He must have vision enough to look ahead for seventeen years and see the development of the art in which your invention is a step forward. He must express this vision in such a way that years hence you will have to be recognized by later inventors as a pioneer. He must know more than you

do and add his knowledge to yours. Above all, the good patent attorney must serve you conscientiously.

The likelihood of not getting the right patent attorney was stressed by Representative Crampton, pleading before the House Patent Committee for more stringent laws. He explained it as follows:

The average law practice involves a degree of association between the client and the lawyer before and during the employment. A man who is arrested on a criminal charge knows who is the best criminal lawyer in that community. If he wants an honest man to defend him, he has an idea whom he wants, and if he does not want one so honest to defend him he has an idea of who will meet his requirements. If it is a matter of protecting a man's civil interests, a business matter, he knows the lawyer, and he knows his standing in the community, or he can go to some one in the community and get that information and be guided by his advice and exercise his best judgment as to the character of the man he employs.

Now this, is perhaps true in patent law in the case of the strongest and wealthiest. The corporations that have a great deal of this business do not, of course, step out blindly and hire patent lawyers because of some advertisement they have seen. They hire a patent lawyer on the basis of their knowledge of the man and his training and experience, and there is a personal relation—often they are retained by the year—and so forth, and they are able to take care of themselves, and we do not need to worry about them.

But the class I am trying to do something for is the great mass of inventors so far as numbers go, possibly not so far as tangible results of efforts are concerned, but so far as their numbers go, the great mass of men and women that are scattered all over the United States, in the most remote sections as well as in the populous centers, who think that they have an idea which is worthy of a patent. They may be of the most slender means. They never saw a patent lawyer in their lives. They have no knowledge with respect to the matter, but they pick up a newspaper, and they see where a patent lawyer has advertised for business, and on the basis of that they hand their idea and their business over to this patent lawyer who advertises, never seeing him. They have not seen him before, they do not see him while he is handling their business, but they simply hire him on the basis of an advertisement in the newspapers.

It is well, then, to proceed carefully in selecting your patent attorney. The fact that you have been attracted to a firm through advertising is neither for nor against it. Investigate it. Ask other inventors who have been served by that firm how well they have been satisfied. If you don't know any such men, then ask your bank what the standing of the patent firm is. After all, there is no better way of judging a firm than by its record.

CHAPTER IV

THROUGH THE PATENT OFFICE

When you have worked out your invention so that it can be clearly understood when you explain it, tell your patent attorney just what it is you have in mind, and ask him to apply for a patent. It must be explained to him in detail. He must be told him how the parts are arranged, how they operate and cooperate, and what special advantages there are in the new features you have devised. Show him in any way that will help to make your idea clear, by photographs, by drawings, by a working model, or by a detailed, written description. It is important before any steps are taken to secure patent protection that the man who takes those steps has the fullest possible knowledge of every fact bearing upon your patent application.

If your invention consists of a process or a method of doing something, or if it is a composition, then make clear all the successive steps in the process, the order in which they are made, the relation one step bears to the other steps, and the results that are attained. When the invention is a composition, tell, also, what are the proportions of each ingredient and what chemical actions, if you know of any, are involved in the process.

It is not necessary for you to have worked out your invention completely down to the last minute detail, however. If you have the main features worked out, with some of the details incomplete, you are ready to file your application for a patent. It must be understood, in such a case, that your invention is workable in theory and is based upon well-known scientific principles.

With all the facts before him your patent attorney prepares your application. It consists of four items:

Your first fee of $20, plus $1 for each claim over 20.
Your petition,
Your specification,
Your oath.
In many cases drawings, also, must be included.

The petition is addressed to the Commissioner of Patents and states your name, residence, post-office address, and the title of the invention for which you seek a patent, and refers to the specification for a full disclosure of your invention. It is signed by you, the inventor.

The specification can best be described by quoting the *Rules of Practice* of the Patent office:

> The specification is a written description of the invention or discovery, and of the manner and process of making, constructing, compounding, and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make, construct, compound, and use the same.
>
> The specification must set forth the precise invention for which a patent is solicited, and explain the principle thereof, and the best mode in which the applicant has contemplated applying that principle, in such manner as to distinguish it from other inventions.
>
> In case of a mere improvement, the specification must particularly point out the parts to which the improvement relates, and must by explicit language distinguish between what is old and what is claimed as new; and the description and the drawings, as well as the claims, should be confined to the specific improvement and such parts as necessarily cooperate with it.
>
> The specification must conclude with a specific and distinct claim or claims of the part, improvement, or combination which the applicant regards as his invention or discovery.

There are six parts to the specification: the preamble, a statement of the nature and purpose of the invention, a short description of the drawings, if there are any, a description in detail of the invention, your claims, and your signature as the applicant.

In the preamble you state your name, nationality, residence, the fact that you are the inventor, and the name of the invention.

The statement of the nature and object of the invention serves to introduce the description, which follows in detail. The description of the drawings tells in a general way what each drawing is.

The description of the invention in detail is important. It must be sufficiently full, clear, exact, and concise, so that any person "skilled in the art or science" to which it applies or to which it pertains most closely will be able to make and use the invention. If the description fails to do this, the patent is not entitled to be granted, and if it should be granted, it will be void.

When your invention is an article of manufacture, especially a machine, constant reference must be made to parts of the drawings. The best way to do this is by numbers—the Patent Office prefers them to letters. With a machine you must explain the principle underlying its operation and the best method in which you plan to use the principle, so that your machine can be distinguished from other inventions.

As for the claims, the statute provides that the inventor "shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention." The Patent Office requires that the claim immediately precede the signature.

It is in the claims that the strength or weakness, the breadth or narrowness of your patent lies. They must be drawn with the utmost care and skill so that each new feature may be covered fully but not too fully. Each claim may stand or fall alone; one claim may be declared valid and the rest invalid. When you have an entire machine as your invention, you may so draw one claim as to cover it all, but do not neglect to have a separate claim for each new part or each new combination. Each of these parts or combinations may be claimed separately, even though they cannot operate apart from the rest of the apparatus. Unless this is done, copyists might use your idea, climinating one small feature, and make, sell, or use the product

of your invention with impunity. If your invention is a process, the claim should contain every necessary step and no more. If your claim covers too much, it could be circumvented without penalty of infringement by others who would omit the one unnecessary step; if it contains too little, it is void for lack of utility.

The oath is a signed statement, sworn to before a notary or person authorized to administer oaths, to the effect that you believe yourself to be the original and first inventor of the invention for which you solicit a patent, and that you do not know or do not believe that the invention was ever known before you invented it. It likewise states the country of which you are a citizen, your residence, and whether you are the sole or joint owner of the invention.

In every original application you must state distinctly under oath that, to the best of your knowledge and belief, the invention has not been in public use or on sale in the United States for more than two years prior to your application; that it has been neither patented nor described in any country before your invention or more than two years prior to your application; and that it has not been patented in any foreign country on an application filed by you, your legal representatives, or assigns, more than twelve months prior to your application in this country. If an application has been filed in any foreign country by you, your legal representatives, or assigns, prior to your application in this country, you must state the country or countries in which such application has been filed, giving the date of such application. You must state, too, that no application has been made in any country other than those mentioned. If no application has been filed in any foreign country, you must so state.

In applying for a patent you are required by law to furnish a drawing of your invention, whenever the nature of the case admits of it. You or your attorney in fact must sign your name to this drawing. It must show every feature of your invention covered by the claims, and the figures should be consecutively numbered, if possible. When the invention consists of an improvement on an old machine, the drawing must exhibit, in

one or more views, the invention itself, disconnected from the old structure. In another view it must illustrate so much only of the old structure as will suffice to show the connection of the invention with it. Two or more sheets of drawings may be used if one is not enough, but the number of sheets must never be more than is absolutely necessary. The Patent Office advises that inventors employ competent draftsmen to make their drawings, as the requirements laid down are complex and rigid. If you cannot conveniently procure them otherwise, the Patent Office itself will furnish the drawings at cost as promptly as its draftsmen can make them.

A model will be admitted as a part of your application only when the primary examiner finds it necessary or useful. In such a case the examiner will notify you. When the invention is a composition of matter the Commissioner may require you to furnish specimens of the composition and of its ingredients in quantity sufficient for the purpose of experiment. In all composition cases where the article is not perishable, a specimen of the composition in proper form to be preserved must be furnished.

When your application reaches the Patent Office, it is classified according to the particular art to which it applies and is given to the primary examiner. Ordinarily he examines applications in the order in which they are received, but there are several kinds of cases which have preference at every period of their examination. These include:

1. Applications concerning inventions deemed of peculiar importance to the public service, and when for that reason the head of some department of the Government requests immediate action.

2. Applications for reissues.

3. Cases sent back by some appellate tribunal for further action.

4. Applications which appear to interfere with other applications previously considered and found to be allowable, or which it is demanded shall be placed in interference with unexpired patents.

5. Applications which have been renewed or revived.

6. Applications filed more then twelve months after the filing of an application for the same invention in a foreign country, where it is shown that the foreign patent will issue by a certain date.

The specifications and the claims in your application being such that the invention may be readily understood, the examination of it and the action necessary will proceed according to its merits.

Now comes the test of your application. The likelihood is that the primary examiner will find some fault with some of your claims and will reject them. In notifying you what claims he has rejected, he will tell you fully and precisely just what reasons he has for rejection. Likewise, he will give you information and references to existing patents which will be useful in aiding you to argue in favor of your specification as you have presented it or to alter it in the light of his objections. Many patent attorneys, indeed, make it a practice to include some claims which they know will be rejected, so that they will draw out from the examiner information valuable to them in preparing a patent that will be as sound as possible.

When the application is resubmitted, with the specification either altered or as originally presented, it is reexamined. Again the examiner may reject it, wholly or in part, with reasons and references fully stated, and again you may resubmit.

As often as the examiner presents new references or reasons for rejection, you may amend your application. In so amending you must clearly point out all the patentable novelty which you think your case presents in view of the state of the art as disclosed by the references or objections of the examiner, and you must show how your amendments avoid such references or objections.

If you neglect to prosecute your application for six months after the date when the last official notice of any action by the office was mailed to you, you will be held to have abandoned your application.

When the examination of your application shows that you are justly entitled to a patent under the law, the Patent Office

sends to you or to your attorney a notice of allowance, calling for the payment of the final issue fee within six months. Upon receiving this fee the Patent Office prepares your patent for issue.

Every patent issues within three months of the date of the payment of the final fee. Every Thursday patents are issued. Your patent will be dated as of the fourth Tuesday after the Thursday upon which the issue containing your patent was closed.

Your patent will contain a short title of your invention, indicating its nature and object, and a grant to you, as patentee, your heirs, and assigns, for the term of seventeen years, "of the exclusive right to make, use, and vend the invention or discovery throughout the United States and the territories thereof." (Design patents are for three and a half, seven, or fourteen years.) Upon the day of its date the patent will be delivered or mailed to you or to your attorney.

It is possible that after your patent issues you find it is inoperative or invalid because of some defective or insufficient specification, or because you claimed as your invention more than you had a right to claim. If the error arose through inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, you may apply for a reissue.

In applying for a reissue you must offer to surrender your original patent. You also must give back your original patent or, if that is impossible, an affidavit to that effect. If a reissue is refused, your original patent will be returned to you upon request.

Suppose, however, some of the claims in your application have been rejected which you are convinced should be allowed, and the rejections are upon grounds which involve the merits of your invention, such as lack of invention, novelty, or utility, or on the ground of abandonment, public use, sale, aggregation of elements, or incomplete combination of elements. You need not rest. You may appeal to the Board of Appeals, consisting of the Patent Commissioner, the two assistant commissioners, and the examiners in chief.

Upon filing an appeal with the board, setting forth the points of the decision upon which the appeal is taken, you must submit a copy of your appeal to the primary examiner. Within ten days the primary examiner supplies a statement of the grounds for his decision, giving you a copy. In reviewing the decision of the primary examiner, the board will consider oral evidence or evidence in affidavit form. It may reverse the examiner's decision, in which case your patent will issue; or it may reject your application. From its decision an appeal may be taken to the Court of Appeals of the District of Columbia, in the manner prescribed by the rules of that court, or a bill in equity may be filed in the proper circumstances with the Federal District Court under Sec. 4915 of the Revised Statutes. Appeals from both the Court of Appeals of the District of Columbia and the Federal District Court are taken to the Circuit Court of Appeals.

CHAPTER V

WHEN INVENTIONS CONFLICT

"Inventive minds run in the same channel," is the way we might paraphrase an old saying to characterize the constant conflict between like ideas in the inventive field. The extent to which this is true becomes impressive with the realization that every year more than a thousand "interferences" are declared in the Patent Office.

"An interference," to quote the *Rules of Practice* of the Patent Office, "is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention." While it is a simple rule to state that the patent generally issues to the person who was the first to conceive an invention and reduce it to practice, it is not so easy sometimes to ascertain which really was the first. In fact, the Patent Office has found it necessary to work out an elaborate code of rules to solve the vexing question of priority.

The time to think about an interference proceeding is not when an interference is declared, but at the time you take the very first steps to work out your invention. Evidence gathered at that time when it is available, assembled in permanent form, and preserved safely will prove invaluable if your invention should be found to be in conflict with that of someone else when you file your application.

That is what O. M. Morse discovered, when he was put to the necessity of proving that he was the first inventor of his celebrated dust collector, a device of considerable commercial importance. When it was placed on the market it became generally used in connection with flour mills, planing mills, and similar establishments. Prior to Morse's invention many flour mills had been blown to pieces or destroyed by fire result-

ing from explosions caused by spontaneous combustion of accumulated dust. It was to prevent loss from such causes that Morse's dust collector was devised.

A considerable time before filing his application for a patent, Morse told his patent attorneys all about his invention. They advised him to apply for a patent immediately, but the inventor had a different idea. He thought it advisable to try to market his invention first and thus determine whether or not it had any commercial value. If it should prove worth the time, money, and effort to go further, then he would apply for a patent.

From the start the new dust collector met with popular favor. It was not strange, therefore, that it was imitated, even copied, by many others. Each of the imitators and copyists claimed the invention for his own, and they all filed patent applications. In all, there were forty-four applications for the patent, each asserting that he was the original, first, and sole inventor of the device.

Following the rules of the Patent Office, the Commissioner declared all of these applications in interference, and required the applicants to submit evidence to determine to which one the patent rightfully should issue. While Morse was one of the forty-four contenders, he was by no means the first to file his application. The presumption was against him, for in interference proceedings the man who files his application first is presumed to have been the first one to make the invention. After a long and bitter contest he finally was adjudged the first inventor, but the fight cost him thousands of dollars.

Sometimes, indeed, when you file your application for a patent, you may discover that another actually has obtained a patent on an invention identical with yours. This might be true, even though he conceived the invention later than you did. It is still possible to have an interference proceeding declared, in which you may prove that you were the first inventor, but even if you do, you are faced with the added burden of explaining away your apparent delay in applying for a patent. Sometimes your neglect to act with

reasonable promptness may be a barrier you will find insurmountable.

Such was the experience of a man named Mason, who, on Dec. 31, 1894, applied for a patent on a gun clip, only to discover that a patent on the invention had been issued to one Hepburn on Sept. 11 of the same year. Mason proved beyond any question that he had made a clip and had tested it out satisfactorily in 1887. He showed it to nobody but a few close friends, however, storing it away until after Hepburn's patent had issued.

His application for a patent was denied. The case was fought up through the Court of Appeals of the District of Columbia, but the courts sustained the Commissioner of Patents. Mason had not taken the proper steps in the preliminary stages; he had waited until someone else had acted before asserting his rights, and then it was too late.

The fact that some other inventor claims the same invention you do does not imply necessarily that he has stolen your idea. In fact, the probability is that he has heard neither of you nor of your invention, just as you probably had no previous knowledge of him. Neither can it be attributed to mere coincidence; there are too many interferences to make such an explanation plausible. The cause lies deeper. Your invention has resulted from your seeing a problem and working out a solution. The problem was there for all the world to see. Undoubtedly, many persons have seen it, and have set to work to find a solution. When the solution is a logical one, it is more than likely that several will arrive at it. In other words, where there is a need for an invention, several persons are likely to make the same invention to fill that need. The writer knows of one interference proceeding in which fifty-four inventors were applying for a patent on the same invention. Each had made his invention wholly independent of the others—had not known, in fact, that any of the others were working along the same lines that he was.

The Patent Office will declare an interference between applications for patents or for reissues by different parties when they contain allowable claims for substantially the same inven-

tion. It also will declare an application in interference with a previously issued patent when the applicant files an affidavit that he made the invention before the filing date of the patentee.

Before the interference is declared, however, all the preliminary questions must be settled by the examiner, and the issue must be clearly defined. The invention which is to form the subject of the controversy must have been patented to one of the parties or have been decided to be patentable, and the claims of each of the parties to the interference must be put in such condition that they will not require alteration after the interference shall have been finally decided. When the claims of two or more applicants differ in phraseology, but relate to substantially the same subject matter, the examiner suggests to the parties such claims as are necessary to cover the common invention in substantially the same language.

This suggestion being complied with within a specified time, the applications are forwarded to the examiner of interferences. A contested case then exists, and the examiner of interferences sends notice of the interference to the inventors or their attorneys. Each party to the interference will be required to file a concise statement under oath on or before a date fixed by the Patent Office, showing the following facts:

1. The date when the invention was originally conceived.
2. The dates upon which the first drawing and the first written description were made.
3. The date upon which the invention was first disclosed to others.
4. The date when the invention was reduced to practice.
5. A statement showing the extent of use of the invention.
6. The date and number of any application for the same invention, filed within twelve months before the filing date in the United States, in any foreign country adhering to the International Convention for the Protection of Industrial Property or having any similar treaty relations with the United States.
7. If a drawing has not been made, if a written description of the invention has not been made, or if the invention has not

been reduced to practice, disclosed to others, or used to any extent, the statement must specifically disclose these facts.

These preliminary statements should be prepared carefully, for in your proofs you will be held strictly to the dates you declare in them. Even if you prove earlier dates than you have alleged, the proof will establish only the date you alleged.

The examiner, upon receiving this statement, seals it and files it, opening it for the inspection of the opposing parties only when each has filed his statement or the time allowed for filing has expired. These statements, remember, will not be used as evidence, but only as statements of the cases which the contesting applicants will seek to prove by evidence.

The parties to an interference will be presumed to have made the invention in the chronological order in which they filed their completed applications for patents; the burden of proof rests upon the party who seeks to establish a different state of facts. Time will be assigned by the examiner for the later applicant to put in his testimony, time for the first applicant to complete the testimony on his side, and, finally, time for the junior party to put in evidence in rebuttal of the senior applicant. If the junior applicant succeeds in overcoming the presumption of priority resting with the senior applicant, the decision is made establishing the junior's priority; if he fails, priority is decided for the senior. The patent then issues accordingly.

Evidence of priority is the very essence of an interference proceeding. It is not enough that you were the first inventor. You must prove it. And unless you took the proper steps as you went along you may find when the time comes that your evidence is lacking.

The safe thing to do is keep a record of each successive step you take. Make a note of the date you first conceived your invention. Put it in writing. Make, also, at your first opportunity a written description of your invention. Date it. Make a drawing. Date that, too. Explain your idea to two or more friends you can trust. Be sure they understand it and could be called upon to describe it if they were called upon to testify. Get them to attach their signatures as witnesses to

your descriptions and drawings. Sign the drawing yourself. It is even a good idea to swear to it before a notary public.

If you make any models, keep them, making a note of the date they were constructed. If you make any improvement in your original invention, set down the date of that, but keep the record you first made of your invention, too. Remember it is evidence of first invention and use that counts in an interference proceeding.

These steps, mind you, may not prove necessary. There may never be an interference proceeding declared in your case; the chance is just about fifty to one that there will not be. But why take that chance? A little forethought will serve as insurance that you will be protected in your rights.

Do not rest upon this, however. You must not let your idea lie idle too long if you would claim any monopoly of it. Laches, which may be defined as "sleeping on your rights," will often prove a bar to obtaining a patent. Any considerable delay between the time the other inventor filed an application for a patent and the time you filed yours or the time you "reduced your invention to practice," that is, assembled your machine or completely manufactured your article, will deprive you of your right to priority.

When you conceive your invention, act carefully, systematically, and with due diligence. Patent rights are valuable, they are fought for jealously by rival inventors, and they are a prize worth a little forethought. It is a pity that inventors through carelessness and neglect sometimes lose them.

CHAPTER VI

"PATENT PENDING"

"Why is there so much delay in the Patent Office?" an inventor, who thought the issuance of a patent for his device was long overdue, asked his patent attorney.

"Well," the patent attorney replied, "the Patent Commissioner assigns two main causes. One of them is the lack of a sufficient number of employees to handle the tremendous and ever-increasing volume of business pouring into the office. The other cause is the large number of interferences, that is, the applications whose claims conflict with the claims of other applications pending at the same time."

"I suppose everyone must curse the delay in getting a patent."

"Not everyone. Do you know there are inventors—aided, of course, by their attorneys—who try to keep their patents pending as long as possible?"

"Do you mean to say there are inventors who ask for a patent, and then try to put off the day when it will issue to them?"

"Precisely."

"But why? Surely they must have some good reason."

"They have lots of reasons when they take that attitude. I listed a few of these reasons some time ago. Here they are:

1. "Time for development.
2. "Broadening of claims.
3. "Extension of the patent term.
4. "More expert work on the attorney's part.
5. "Keeping copyists away.
6. "Readier salability."

"Can't you be a little more explicit?"

"All right. Suppose you have a good idea for an invention, and you file your application for a patent. You make a

complete disclosure to the Patent Office of everything you have in mind. The Patent Office sees you have a pretty comprehensive idea—your machine includes a cooling apparatus, an oiling device, valves, and what not—and it asks you to be specific as to just what you want to claim as your invention.

"Now, after the Patent Office makes this request you have a year within which to take the next step. In the meantime you will be conducting further research or using your machine, and this research or use may show you the advantages of some features and the disadvantages of others. Guided by the new things you have learned, your patent attorney may direct the prosecution of your patent along the lines you have found to be the most desirable.

"So much for the matter of development. Now take the matter of broadening your claims. Generally, if an invention is a valuable one, it is not out more than two years before competitors try to beat it. They may see some little thing that you have neglected and seize upon that as a shield against a suit for infringement. If you hold your application in the Patent Office, however, while you put your invention on the market, you can see which way the copyists are going to jump, and you can direct your claims accordingly. In other words, you can make your claims cover what the other fellow is making.

"Now as to the extension of the term of protection. That is self-evident, I think. Under the law your patent runs for seventeen years from the date of issue. The longer you keep your patent pending, the later it issues and the later it expires. In some European countries a patent runs from the date of the application, but not here.

"Now for the attorney's part. You know as well as I do that the work an attorney does on a patent application, and its prosecution has just as much to do with the strength and breadth of a patent as does the merit of the invention. If an attorney rushes through the job, he can get you a patent, but it might not be worth much. Other things being equal, the more time an attorney has to devote to a patent application,

the better claims he can get you. And the longer time your application is pending, the more deliberation your attorney can give to your case.

"Now as to the matter of keeping the copyists away. Your invention comes out, and the man who seeks to copy it wants to play safe. If your patent has issued, he will get a copy of it and see just what the claims cover. If they are narrow he can find a way to get around them. Suppose, however, your patent is still pending. Your application and all the claims in it are held in secret in the Patent Office. There is no possible way for him to know what your patent will cover when it issues. His only course would be to make an independent search of all the other patents along the same line and try to make a guess as to what your patent might cover.

"Now coming down to salability. After all, what you are getting a patent for is to dispose of it. When a big manufacturer becomes interested as a prospective purchaser in a new invention he wants to look over the patent situation concerning it. Suppose your patent is two years old—it has only fifteen years to run instead of seventeen. That isn't so important, however, as the fact that while your invention has merit, your patent may not be a very good one. In such a case the manufacturer will not buy. After two years, you know, a patent cannot be reissued, and, anyway, reissued patents are not so strong to sue on should the manufacturer try to go after infringers.

"If your inadequate patent should be pending, however, the manufacturer's own patent attorney could take hold of it and fix it up properly so as to cover adequately all of the claims your invention is really entitled to."

"No wonder," said the inventor, after the attorney had made this lengthy explanation, "patent attorneys sometimes advise their clients to keep their patents pending. There don't happen to be any more reasons, do there?"

"Oh, yes," the attorney replied. "There is the matter of extending your time for getting foreign patent protection. The general rule is that you may apply for your foreign patent

within one year of the time your application was made in the United States, or at any time before your United States patent issues. As long as you keep your patent pending here you may apply for a patent abroad. If your United States patent issues, however, and more than a year has gone by since your application was filed, you are just out of luck.

"Then there is this matter of standing in your own way. Many an application for a patent has been denied because it has been anticipated by a prior patent issued to the same inventor. If your application for a patent on your first invention is still pending, you can get protection for your second invention that overlaps it, by merging the two. This is not possible if your first patent has issued."

"Wait a minute," interrupted the inventor. "With all these reasons you're giving me, I'm beginning to get just a little suspicious."

The attorney laughed.

"Everything I've told you is the truth," he said, "but I'll admit it's not the whole truth. There are two other reasons which might lead an attorney to recommend delay in the issuance of a patent. In the first place, the longer your patent is pending, the longer you are in contact with your patent attorney, and the longer you are in contact with him, the more opportunities he has to serve you. You realize, of course, that when an attorney serves you he expects to be paid. Suppose that, some time after your patent has been applied for, you make a second invention. If your patent has issued, you might take the notion into your head to go to some other patent attorney. If, on the other hand, you are still dealing with your attorney about your first patent application, the chances are that you will let him handle your second.

"Then, too, the longer you keep your patent pending, the more litigation there is likely to be. While this might not cost you more, it does mean increased fees for the attorney.

"I am not saying, mind you, that any patent attorney ever has his own interests in mind when advising a client to delay the issuance of a patent, but I do want to point out that the delay brings no hardship to the attorney."

"How long would it be possible for an inventor to keep his patent pending?"

"Oh, indefinitely. It's possible, I should say, to have a patent application run on and on like the famous lawsuit of Jarndyce and Jarndyce, which Dickens pictures in 'Bleak House.' I know of one patent application that was kept going in the Patent Office for thirty-four years. It was really a wonderful invention, a method of recording and reproducing sound by means of the photographic process. Here. Let me read you a few excerpts from the record, made by Commissioner Ewing, one of the greatest patent commissioners we ever had. The invention was made by a man named Charles E. Fritts. The original application was filed in 1880, and the decision was not made until 1914."

The attorney reached up to his book shelves and dragged down a thick volume labeled "Official Gazette, U. S. Patent Office, June, 1916." This is what he read:

Since this application was filed 1,583,011 applications have been filed in this office. A count made last June indicates that there are about 135,000 applications pending. It results that the office during the thirty-four years that this appeal has been on file has finally disposed of nearly 1,450,000 other applications.

This patent and eight divisional applications are the only ones which have been pending in the office for so long a time, and aside from these are less than forty which have been in the office for fifteen years or longer and less than two hundred and fifty which have been in the office for ten years or longer.

While it is regrettable, it is not inexplicable that out of nearly a million and a half applications one should, under the liberal rules of time allowed for amendment, have prolonged its life to thirty-four years.

It is not my intention to review the history of the case. Much of the fault for dilatory prosecution doubtless rests with the office. How much, if any, is chargeable to the applicant I do not believe that it would serve any useful purpose to inquire. He has conformed to the rules of the office and the requirements of the status sufficiently to bring the case here on appeal as a live application. The applicant is dead, but the cause survives. There is no provision of law under which it can be refused consideration or patenting for so much

as the applicant may be entitled to. The only way to bring the matter to an end is to grant the patent at the earliest possible date, thereby setting a limit of seventeen years beyond which it cannot run.

A serious question has been raised by each of the lower tribunals—whether or not it is possible to make a practical sound record by the photographic process and apparatus disclosed in this application. For years it has been the dream of sound-record makers to use a photgraph of the oscillations of a ray of light controlled from a diaphragm as a recorder of sound, since it is operable with very slight expenditure of energy and theoretically should reproduce perfectly the delicate sound waves; but all such attempts have proven practically valueless on account of the jagged condition in which the sound record is left. Especially would this have been true in the state of the art of photography in 1880. In view of the length of time that this case has been pending, however, the question of operativeness will not be raised by me. It should have been raised and settled by the generation that has preceded us, but has, in fact, been waived.

"The Commissioner allowed some of the one hundred eighty-seven claims in the application and disallowed others," said the attorney, laying down the book. "Had all of them been allowed, the invention might have covered the entire art of producing moving pictures. Even with the Comsioner's decision in 1914, the case did not end. The inventor had died in 1905, and his widow appeared to the Court of Appeals of the District of Columbia. The court called particular attention to the fact that other inventors since Fritts had obtained patents for inventions his invention might have covered. Here is what the Court of Appeals had to say about the phase of the matter." The attorney continued the report.

While the questions involved in the foregoing cases were different from that now under consideration, we think the principle there announced applicable here, namely, that an inventor will not be permitted to take advantage of his own laches. Assuming, as we must, that the applicant in the present case was legally justified in permitting his application to remain in the Patent Office for so long a time, we can find no justification for his failure specifically and seasonably to claim inventions for which patents were regularly issued to others. Those other patentees, of course, had no knowledge of this applicant's claims. Even the Patent Office, with these specifications and claims

before it, was unaware of any interference in fact. We say this because, had the Patent Office entertained a different view, an interference would have been declared. When these patents issued, however, this applicant was bound to know whether they covered something which he already had invented, and he further was bound to know that unless he filed claims covering the subject matter of those patents a monopoly for seventeen years would be enjoyed by those patentees although, according to his present view, they were not entitled to it. He knew that, as a reward for making a useful or valuable invention, the law granted a monopoly for seventeen years, yet he deliberately stood by and permitted those patentees to exploit those inventions for the full statutory period, and now, when the financial returns will be far greater, he asks as a reward for his laches a second monopoly for a like term of years. The statement of the proposition carries its own answer. It was his duty, within a reasonable time after the issuance of those patents, to assert his claims thereto, to the end that an interference might be declared and the issue of priority determined. By failing to assert such claims, he must be held to have abandoned them.

Monopolies are inherently obnoxious, and it is solely because of ultimate benefit to the public that a conditional form of monopoly is permitted an inventor. When the element of diligence or good faith in an applicant is lacking, there is no valid reason for such a construction of the patent laws as would effect an extension of the limited monopoly granted upon prescribed conditions which include those very elements. Inasmuch as even diligence and good faith do not entitle one to a monopoly upon a monopoly, it is not perceived why delay and the lack of good faith should do so.

"Would you advise inventors to keep their patents pending as long as possible?" the inventor asked.

"No, as a general rule I would not. The Patent Office frowns upon such practice, and rightly so. It is against public policy, although there may be special circumstances which justify it in particular cases. Big corporations are adept at delay. Sometimes they will succeed by perfectly legitimate means in keeping a patent pending for years, but it takes a clever attorney. They generally have two objects in view—to keep a process of manufacture secret and to extend the term of patent protection. The best way for an individual is likely to be the simple, direct, clean-cut method

of applying for a patent, prosecuting it through the Patent Office and taking your patent when it issues in due course. After all, you have no real protection—there are no rights you can enforce—until your patent issues."

"But how about marking 'Patent Pending' on the invented article? That affords some protection, doesn't it?"

"'Patent Pending' on an article gives not one iota of protection. You have no monopoly of your invention until the government gives it to you, and it gives it to you only with the issuance of your patent. The mere fact that you have applied for a patent confers on you no right to sue an infringer. Pardon me, I should not have used that word. There can be no such thing as an infringer until there is a patent to infringe.

"As a matter of fact, marking an article 'Patent Pending' may be a bad thing to do. Suppose your invention is in a field of cutthroat competition—every man ready to seize every advantage, fair or unfair, to beat his rivals. You come out with something new—something good that will give you the jump on your competitors. You mark it 'Patent Pending.' What is the result? You have given them notice that you have applied for a patent and it has not yet issued. What do they do? Aided by an unscrupulous patent attorney or perhaps by a conscientious patent attorney whom they deceive, they file applications on their own account covering your invention and claiming it as theirs. The Patent Office declares an interference to ascertain who was the true and first inventor. Then you have your work cut out for you. Eventually you may get your patent, provided you have been careful to collect and preserve evidence of your priority, but it is a troublesome process and sometimes an expensive one. It would have been better for you to have waited until your patent issued before putting your invention on the market."

"But I see 'Patent Pending' so often on articles that there must be some advantage in it."

"The only advantage lies in the moral effect it may have on competitors. Many a small manufacturer is shooed away from imitation simply by seeing the legend on the product. In fact, I have known manufacturers to bring out a new device

and apply for a patent, not caring whether they ever receive a patent or not. All they want is the privilege of marking 'Patent Pending' or 'Patent Applied For' on the articles for sale, knowing that the warning will frighten away competitors.

"And they have no reason to be frightened?"

"Not so long as the patent remains pending. The notice amounts simply to this: 'This article is my invention; I have applied for a patent and I warn you not to copy it; if you do, you are liable to a suit for damages and are likely to have an injunction slapped on you as soon as the patent issues.' Manufacturers, knowing that a patent is pending but not knowing when the patent may issue, run the risk, if they are imitators, of being stocked up with a large supply of the infringing articles, which they cannot dispose of without being liable to heavy damages."

"Well," sighed the inventor, "this thing of marking 'Patent Pending' seems just as two-sided as the matter of getting a patent promptly or of applying for it and then holding it off as long as possible. An inventor hardly knows what to do."

"No," agreed the patent attorney, "an inventor usually doesn't know. The procedure in any particular case depends upon the circumstances in that particular case, upon industrial and trade exigencies which make it impossible to state a rule that will fit all conditions. What would be wise for one invention would be unwise for another. The best advice I can give you is to relate to your attorney the whole story and be guided by what he recommends."

CHAPTER VII

THE INVENTOR AND HIS EMPLOYER

In 1917, the Ludlum Steel Company, known throughout the country for its high-quality tool steel, employed Percy A. E. Armstrong as its sales manager. A written contract was signed by which Armstrong agreed to give all his time and services to the company and to perform all such duties and services as the company might require at a fixed salary plus a stipulated commission on sales. Later he was made a director and vice-president of the company and continued in the employ of the company until 1925, when he resigned.

Not only was Armstrong a good business executive, but he was a metallurgist, as well. During his employment he made numerous discoveries and inventions of ferrous products and processes for their manufacture and hardening. He obtained patents from the United States and foreign governments. In making these discoveries and inventions he was assisted by the company's employees, and he used the company's plant, materials, and equipment. The company not only paid all the cost and expense incident to the research, experiment, and development of these inventions, but even went so far as to pay the cost of the patent applications and their prosecution.

Inasmuch as Armstrong was the actual inventor, all the patents were issued in his name, and he held them as his own until 1923, when he transferred and assigned all his rights to the steel company. The written contract, signed by the officers and directors, gave him as his consideration an agreement to pay him a certain percentage of the net profits realized by the company on each kind of ferrous product made and sold or acquired and sold under the patents, as well as a certain percentage of the selling prices of licenses granted to other

manufacturers of steel products to manufacture and sell under the patents.

Three years later, Myrtle M. Naylor, one of the minority stockholders, brought an action in the Supreme Court of New York to restrain the company from carrying out the terms of the contract. She charged that the contract was invalid and that its execution was beyond the company's authority and in violation of the rights of the stockholders. The company, she maintained, was the rightful owner of the patents, Armstrong's original contract of employment providing for paying him in full for his full time and services. That the inventions were developed in the company's time, with the company's men, plant, and materials, and at the company's expense, seemed to strengthen this view.

Armstrong claimed that the patents had belonged to him, and that there was no agreement of any kind, express or implied, at any time, that he should assign any patents he might obtain while in the company's employ. The contract of employment, which might have decided the issue, was indefinite and doubtful. Upon the subject of discoveries, inventions, and patents it was silent.

Here was a clean-cut issue. Did the patents rightfully belong to the inventor or had they belonged to his employer? To hear and determine the issue a referee, Alvin E. Mambert, was appointed. He said:

> Under such circumstances the uniform, unquestioned acts of the parties from the outset, over a term of years, become a controlling factor in determining what the parties meant by the language used in their agreement.
>
> The evidence shows that the parties when they executed this last-mentioned agreement did not have in mind patents and patent applications. Armstrong was to be a sales manager and improve the business of the company generally. He was to build up the metallurgical department, and he did this very successfully. In the spring of 1919 he had discovered a process for making stable surface alloy steel and through the company's attorney obtained from the United States Government a basic patent No. 1322511 therefor, and subsequently discovered processes for making a so-called foolproof chisel steel and a stainless and rustless steel and obtained patents therefor through

the same channel. From time to time after his first discovery and invention he made a number of other discoveries in ferrous products and obtained patents for them.

No original suggestion as to these discoveries and inventions ever came from the company.

The company manufactured and sold products under these patents. From the time of the first discovery and first patent it was conceded by the company that Armstrong was the sole inventor and that the company was entitled to the shop rights and a license to manufacture only. No claim of ownership of these patents was ever made by the company until after the execution of the May 1, 1923, agreement, which expressly acknowledges Armstrong to be the sole owner of all patents taken out by him while in the employ of the company, and which are enumerated in the agreement. At the expiration of the Armstrong employment contract on Sept. 1, 1920, it was renewed upon exactly the same terms, except that Armstrong's salary and commissions on sales were increased. Thereafter, the company took a written assignment of these patents from the patentee as security for a loan made by the company to him, and later, when it desired to mortgage its property and issue bonds, took an assignment of any interest Armstrong might have in the company's shop rights. In both of these instruments Armstrong was acknowledged to be the sole owner of these patents. In fact, the inventor's ownership of all patents obtained by him was never questioned from the time he entered the employ of the company until the commencement of this action, a period of about eight and one half years.

These and other acts and conversations of the parties to the contract of employment appearing in the evidence, lead irresistibly to the conclusion that the practical construction of the employment contract is that there was no specific employment to discover and invent, and, therefore, no implied agreement to assign the company any patents that might be obtained by the employee.

The plaintiff cited in her argument a long list of cases, including those of the Standard Parts Company *vs.* Peck and the Air Reduction Company *vs.* Walker, in all of which the ownership of patents obtained by an employee was declared to be vested in the employer. Commenting upon these, the referee said:

In the Standard Parts Company case the employee was engaged to "devote his time to the development of a process and machinery,"

and the Court held that any patents that he obtained therefor belonged to the employer, but adhered to the rule that the "mere fact that one is employed by another does not preclude him from making improvements in the machines with which he is connected as his individual property."

In the Air Reduction Company case the defendant was employed by the company as a "research chemist," among other things, to discover or invent some method or means for utilizing commercially the gas known as "neon," and Judge Cropsey held that there was an implied agreement that any patent the employee might obtain should be assigned to the company.

These and the other cases cited by the plaintiff and upon which she relies are based upon the rule that *where there is a specific employment to invent, the employer is the equitable owner of the patents obtained by the inventor;* but, on the other hand, the cases cited and relied upon by the defendant Armstrong uphold the well-established rule that *where there is merely a general employment, the employee is entitled to any inventions that he may make and patents he may obtain therefor.*

I am satisfied from all the evidence and briefs that the defendant Armstrong was generally employed and not specifically employed to discover and invent and that he was not in duty bound to assign to the Ludlum Steel Company any patents he might obtain while so employed.

The Ludlum Steel case is cited not because it establishes any new principle of law or has attained any particular prominence, as legal conflicts go, but because it illustrates clearly just what the rights of the employee are with regard to an invention. In this, as in every other case, the whole question hinges on this: to whom did the employer and employee intend that inventions of the employee should belong? When there is a clear, specific, written agreement there can, of course, be no question; but when there is no express agreement, then the acts of the parties over a term of years must be considered to interpret what they both understood by the relationship.

It is strange that the rights of employer and employee with regard to inventions is so little understood, for the law is clear. Again and again the courts have held that there is no obligation on the part of an employee to assign to his employer patents obtained for inventions made in the course of his employment—that is, there is no obligation arising out of the

mere relation of employer and employee. The obligation can be created only by contract.

The case which seemed to settle this question was that of the Pressed Steel Car Company *vs.* John W. Hansen. The company sued Hansen to compel him to transfer six patents which had been issued to him. Hansen had been chief engineer of the company at the time the inventions were made, and for several years previous to the incorporation of the company had been employed by the company's predecessors. He had entered the Pressed Steel Car Company's employ, it was claimed, "under an agreement and understanding to devote his entire time, ability, and skill to the company's business and his advancement, and that all inventions and improvements which he might make during the period of his employment, and all letters patent that might be obtained for them should be the sole property of the company."

Hansen denied there was any such agreement. Admittedly there was nothing in writing. An oral contract to assign patents, is, of course, admissable, and, if you can prove it, it will be enforced. In the Pressed Steel Car case it became a question of whether or not there was an agreement or contract, and, inasmuch as the suit called for specific performance, the terms of any contract there might be had to be proven clearly. Although it was shown that Hansen had assigned other patents to his employer, nevertheless the courts refused to consider that as establishing a contract. He was permitted to retain his independent ownership despite his employment.

A bitter trade war in which two enormously wealthy companies fought for a profitable line of business revolved about the hiring away of an inventor by one company from another. The issue was decided upon the interpretation of the relation of employer and employee after the contract of employment had expired but while the inventor was still employed.

For years the National Cash Register Company had dominated the cash-register field. In 1909, it employed Frederick F. Fuller, cash-register inventor, under a written contract for one year at a salary of $5,000. By this contract he agreed to transfer to the company all cash-register mechanisms he

might invent during his employment. If, at the termination of the contract, he left the company's employ, providing the company was still willing to retain him at the same salary, he agreed not to enter the service of any other cash-register company for a period of one year immediately following the severance of his connection with the National Cash Register Company. Any inventions he might make in that year he was to assign to the company.

Soon after the year ended, Fuller went to the executive in charge of his employment and asked for a new contract. It was refused, but he was retained on the payroll. Nothing was said about abrogating the original contract, except as to its term. Fuller was free to go when and where he pleased.

In 1917 the Remington Arms Company, making plans to break into the cash-register field, hired Fuller away from the National Cash Register Company by the allurement of an increased salary and a large bonus, in the event of success, to invent a new cash register for it. This he succeeded in doing within a year.

The Remington Arms Company is said to have spent $1,500,000 in developing the Fuller cash register and in a few years had manufactured 58,000 of them. The company, relying upon the Fuller patent, had become a formidable competitor of the National Cash Register Company. The National Cash Register Company claimed the ownership of the patent and sued for it in the New York Supreme Court. Defeat for the National meant the continuance in the field of a strong competitor. Defeat for the Remington meant a loss of $3,000,000, to say nothing of throwing 3,000 workmen out of employment at its plant at Ilion, N. Y. Eminent lawyers were retained by both sides to thresh out this question of just what were the respective rights of this inventor and his employer.

In the lower court the National won. In the Appellate Division the decision was reversed. The Court of Appeals in 1925 upheld the Remington Company. Of Fuller's freedom to leave the National's employ without any strings tied to him, the court said:

The inference that he was free to do this must be found, if at all, in one significant fact. After the new arrangement was made, Fuller was called upon to execute and did execute an assignment in a form annexed to the 1909 contract, but not executed with it, presumably because not pertinent to its term, of all cash-register inventions made or to be made while in the employ of plaintiff. This instrument did not include inventions made by Fuller for the period of a year after leaving such employment. The inference is reasonable and permissible, from all the circumstances, that it was the intention of the parties that Fuller should give up his definite term of employment for an employment at will, and that plaintiff voluntarily relinquished its claim on him for inventions made after leaving the employment.

The learned trial justice took the view that this was merely a confirmatory assignment. The Appellate Division took the contrary view of its effect. It is confirmatory only in part. The conclusion is sustained that the new employment was to supersede the old employment, that the old contract was, to this extent, at least, no longer in effect and that the assignment was thereafter the measure of Fuller's duties to plaintiff.

Thus far we have been discussing the ownership of the patent. It is clear that in the absence of a contract, express or implied, to the contrary, the title to the patent rests in the inventor. The right to *use* the invention, however, is another matter.

Suppose a man is employed to work in some particular branch of his employer's business. Suppose that at some time—any time—before his employment ends, he conceives an invention which seems to be applicable to his employer's business. Suppose, further, that in the course of his employment he uses the property of his employer to reduce his invention to practice. Then suppose the employer should make, use, or sell specimens of the invention, and that the inventor should make no protest of any kind, and should demand no reward either immediately or in the future.

In such a case it is implied that the employer has a license or "shop right" to use the invention under any patent which may be granted to the employee.

The extent of this implied license depends upon the facts and circumstances in the particular case. Thus it may cover

all the specimens of the invention which the employer may make, use, or sell during the life of the patent, or it may be confined to some or all of those specimens which were made, used, or sold with the inventor's knowledge, during the time of the inventor's employment.

Under a written contract an employee agreed to devote his time to the "cheapening of the process" used by his employer. In the course of his employment he invented a process relating to his employer's business as well as machines for carrying out the process. Then he constructed six machines at his employer's plant at his employer's expense. Later a dispute arose as to what the respective rights of the parties were. The courts held that all the facts implied a license to use the machines and to replace them and also to practice the process, even though there was no provision in the contract of employment which would give such right.

When such a license is implied from the facts, it passes to the assigns or successors of the employer, according to the particular circumstances which may justify such a passage in the particular case.

Unusual circumstances sometimes arise which raise a question as to just what a contract of employment covers. This would be the case when an employee assigns to his employer all the inventions he makes during the term of his employment, and makes an invention between the time he signs the contract and the time he enters the other's employ. Here, in the absence of any express provisions to the contrary, the employer will be presumed to have the exclusive use of the invention.

Sometimes the interpretation of a contract will depend upon whether the invention lies in the line of the employer's business or not. Such was the case when the Triumph Electric Company sued Louis H. Thullen. The company, manufacturer of generators, or dynamos, and motors, bought control apparatus from other concerns. What it made and what it bought were sold together as units.

Thullen, an experienced engineer, was employed under a contract. While employed, he conceived the idea of an

improved apparatus for automatically controlling electric motors. The company learned that he had applied for a patent and demanded that he assign it. When he refused, the company discharged him and then sued him to compel him to make the assignment. The company based its claim upon the contract of employment, which provided that Thullen would devote himself to the interests of the company and "while in its employ, in the event of any design being capable of being made the subject matter of a patent application, such application and patent shall be assigned to the company."

Thullen, on the other hand, based his stand upon a further provision of the contract that the agreement to assign did not apply to "any patentable design," which he might "discover not applicable to the line manufactured" by the company. He asserted that a control apparatus was out of the employer's line of manufacture.

To assist in making its decision the court had these additional facts: The shop work involved in perfecting the invention was done at Thullen's expense; Thullen likewise paid the expense of getting the patent; and the patent was issued after his discharge from the company. The court, in deciding in favor of Thullen, stated:

> Was it intended that patents relating to control apparatus should be the property of the plaintiff or was its ownership to be limited to generators and motors? In the light of the distinction between control apparatus, which it bought, and generators and motors, which it manufactured, the use of the latter word at least introduces an ambiguity.
>
> We do not feel called upon to interpret this contract further than to state the conclusion reached that we cannot find it was the intendment of the defendant that patents relating to control devices, as distinguished from generators and motors themselves, should be assigned to plaintiff, and, in the absence of such a finding, we must refuse the specific relief prayed for, which is to enter a mandatory order that the defendant assign this patent to plaintiff.

All of which goes to show that if inventions are contemplated a clear, definite, complete contract should be signed by both employer and employee, unmistakably defining the rights of

each party. Forms of such contracts are reproduced elsewhere in this book. When there is no written contract the courts will try to interpret from what the parties said and did just what they would have put into a written contract if they had executed one.

CHAPTER VIII

TRAPS SET FOR PATENTEES

As soon as your patent is granted, your name and the city or town you live in, together with a brief description of your invention, is printed in the *Official Gazette*, a weekly publication issued by the United States Patent Office. This publication is read by a host of persons, among others, whose main business in life is to get money from inventors and give little or nothing in return. From the *Official Gazette* they obtain your name and the names of hundreds of other patentees from whom they expect to benefit.

Almost as soon as you learn that your patent is issued you begin to receive their postcards, their circular letters, and their printed literature. Their propositions sound attractive, their circulars are convincing, and their formal-looking contracts seem to have terms which are advantageous to you.

Be careful. Few of these individuals or concerns, in spite of their substantial-sounding names, have any facilities for selling patents. Their interest in you ends when they have received your money. In other words, their object is not to sell inventions, but to sell inventors.

In order that you may be on your guard against "patent brokers" with schemes to get your money, let us look over a few of these schemes. More than likely one or more of them will be proposed to you, and it will fail to tempt you when you recognize it. "Forewarned is forearmed."

One man writes to tell you that your patent is not a good one, but that if you will pay him a certain fee he will have the defects remedied.

Another advises you that your patent is valuable and that it will make money for you if it is introduced properly. The rights for this state, he says, are worth a certain sum, and for

that state another sum. If you will advance him a small amount—anywhere from $10 to $50—he will have the necessary advertising circulars printed, and your patent will be as good as sold. Sometimes this offer is varied to make it sound more plausible. An odd sum of money is asked for, say, $1.90 for postage and $5.50 for printing, in order to send information to a list of manufacturers who, he tells you, are on the lookout for just such inventions as yours, which they can buy for prices that will seem handsome to you. The odd sum of money, $7.40, somehow makes the scheme sound more genuine than if round figures were used.

One company, with a name that sounds impressive, offers to insure your patent for a short time only against infringers. You pay $8 within thirty days and you get "patent insurance" for a year. As a matter of fact, there is little likelihood that there is going to be any infringement in that time, and even if there should be, you probably would find it mighty hard to collect anything from the man who is so anxious to collect your "premium." This applies only to some insurers, however. Really substantial and sincere concerns have tried patent insurance and have met with a measure of success.

One man may write you that he has an actual offer of $100,000 for the patent rights for Canada. He says he will take out a Canadian patent for you as soon as you send him the fee. But when the Canadian patent has been obtained, the prospective purchaser has changed his mind.

A scheme, a little more complicated, is this: A firm purporting to be manufacturers sends you a letter inquiring what price you ask for your patent. You reply, saying $10,000. Then another firm, supposed to be the agents of the pretended manufacturers, writes you that the "manufacturers" have decided to accept your offer, provided your title and claims are examined and found to be all right. The agents ask that you send $50 for the examination. If you send it, an unfavorable report is made, and you have nothing to show for your $50 but your experience. This scheme has several variations.

Another used extensively is that of the so-called patent engineer. You are advised that a survey should be made show-

ing the value of your invention and how it will meet the needs of the market. The company offers to give you this survey with an impressive report and explains to you that such a report will enable you to sell your patent more readily. Such a survey and report might be highly desirable if it were actually made; but when it is ready-made and is passed out to you on payment of a fee—usually $25—it, of course, has no value whatever; it is only another way of spending $25. The fee, by the way, in such cases is not paid in advance, but only upon receipt of the impressive-looking "report."

You are even likely to be appealed to by tricksters in Europe. To many a patentee comes a letter from France informing him that he has been made a member of the "Academy of Science." All that is necessary for him to do, he is told, is to send fifty francs (normally $10) to cover the cost of his parchment diploma and its framing, boxing, and transportation.

Although these schemes differ widely from one another, they usually have one feature by which you can recognize them—most of them ask for your money in advance. Whether the sum asked for is to cover the cost of advertising, to have circulars printed, to secure copies of the patent for distribution, to have illustrations made, to pay a membership fee in some inventors' league, or to enrol in some bureau—the fact that money is asked for in advance should serve as a warning.

Another form of sharp practice has appeared which is all the more dangerous because money is *not* asked for in advance. Many inventors have been taken in by it because it appears on its face to be entirely honest and honorable. While the other methods we have discussed are costly to the inventor whether his invention is really marketable or not, this one is especially bad for the invention which is destined ultimately to be sold; in fact, the more someone pays the inventor for his invention the more is he fleeced.

Briefly, this system is as follows: A firm advertises that it has facilities for marketing or financing inventions, and it features prominently the fact that it asks no money in advance. The inventor who is responsive is asked to sign a contract

providing that the "promoter" be given a fee of twenty-five per cent or some other portion of whatever sale price may be received—not what price may be obtained through the promoter's efforts, mind you, but a percentage of whatever price the *inventor* may receive. This contract signed, the promoters tuck it away in their safe and do nothing. After waiting a year or more, the inventor gives up hope of getting any results through them, tries some other method of selling his invention, and succeeds. When he collects he finds that he is bound by written agreement to give a substantial portion of what he receives to these "promoters" who have done nothing. He may protest as he will, but he is bound by his own signature.

If you would be assured of safety keep as far away as possible from unscrupulous promoters of inventions. It may be your good fortune to intrust your invention to professional promoters who are both conscientious and capable, but the chances are against you. Such promoters are in the minority. You are your own best promoter; no one has your welfare at heart as you have, and none appreciate better the possibilities there are in it.

If, however, you feel that for some reason you are not qualified to promote your own invention and that you must act through an agent, then by all means adopt the following simple, common-sense course of procedure:

Select an agent whom you know personally is one to be trusted, or who has been investigated and is well recommended by those who are in a position to know.

Have as your representative only a person who has had experience in marketing an invention. Should he be inexperienced, he might be hoodwinked as readily as you yourself might be by clever sharpers.

CHAPTER IX

WHAT IS THE PATENT WORTH?

You may begin to seek a profit from your invention as soon as your application for a patent is filed in the Patent Office. True, a mere filed application will not give you sufficient grounds to sue anyone who may be an infringer, but it will give you priority rights in case someone disputes that you are the inventor, and, furthermore, you, or the person to whom you assign your rights, will be able to recover at law from infringers when later the patent does issue.

There are three main ways to make money out of your patent, and at the outset you should try to decide which of them to adopt. These three methods are:

1. Selling the patent outright.
2. Leasing the rights on a royalty basis.
3. Marketing the article yourself.

The quickest, safest, and easiest of these three methods is the first, though it may not bring in so much money in the end as either of the other two. If it is quick, sure money you want, sell the patent outright. If this method will not produce so much money as you think you are entitled to, and if you are confident your invention will be a success, then try leasing it on a royalty basis or selling the manufactured product yourself.

Whichever method you decide to pursue, you should first appraise your invention—find out just what price it ought to bring.

Put yourself in the place of the manufacturer who, you hope, will buy your invention or the rights to it. He has to be convinced that it is going to make money for him—more money than he is making on what he already is manufacturing and selling. Otherwise he would not want your invention.

The manufacturer will ask himself this question: Will the invention outsell other devices in the same class which are already in the market?

To do this the invention must have one of the following qualities:

1. It must be more simply or more cheaply made, so that it can be put on the market more cheaply.

2. It must give better results; that is, it must do its work in a shorter time or at less expense; it must save power, labor, and time.

If the invention can combine both of the above qualities, its value is doubled, and it is almost certain to be a success.

In placing a value on the patent—remembering that you are looking through the manufacturer's eyes rather than through your own—these factors must be considered:

1. Cost.
2. Selling price.
3. Quantity that can be sold.

To estimate the cost is simple. Take a model of the article or specifications of it to a number of manufacturers and ask each of them to give you a price on making and selling 10,000, 50,000, 100,000, and 1,000,000. Take the figure of the lowest bidder per article as your cost.

Fixing a selling price is more difficult. If a similar article, or an article answering the same purpose, is already on the market, then estimate that the selling price would be the same or a little lower than the prevailing price. To fix a higher price would mean wiping out any benefit you would derive from having a superior article.

Then estimate the manufacturer's cost of handling. This will depend upon the way he handles—whether he sells it direct to retailers, through jobbers, etc. There will be, in addition to the manufacturing cost, the expense of advertising, freight rates, and other items.

Now estimate the quantity that you may reasonably expect would be sold. This will depend upon the nature of the article. These questions affect the answer:

1. How many persons are possible users of the article?
2. How many times will each of them buy it?
3. How long will they continue to buy it?

In other words, the quantity sold will depend upon whether the article appeals to all classes of persons or to only a limited class. A safety razor would be suited to every man; a hunting rifle to only a small percentage of men. It also depends upon whether there is the possibility of repeat orders from satisfied users. One can opener would last for years; furniture polish would have to be bought again and again. The quantity sold would depend also upon whether the demand for the article would be temporary or permanent. A novel toy would soon die out in popularity, while there would be continuous and increasing demand for a successful car-coupling device.

Estimate as nearly as you can the number of patented articles that will be sold in ten years. Multiply that quantity by the selling price. Multiply the quantity, also, by the cost of manufacturing and selling each article, taking into consideration both the actual cost of turning out the article and the overhead expense. The amount remaining after subtracting the total cost from the total selling price is the manufacturer's profit. Naturally, he will want to keep the bulk of this profit. It is only fair that he should. Remember that the manufacturer is doing all the work of selling and that he is taking all the chances of loss. He is entitled to the lion's share of the benefits, even though it is true that the idea originated with you, the inventor.

In ordinary circumstances you should be satisfied with 20 per cent of the estimated profit. Let this 20 per cent be the value, then, that you place upon your patent—the price you ask when offering it to a manufacturer.

But, after all, you ask, is not this question of whether the invented article will sell or not a matter of opinion? It is. There is, however, such a thing as getting an expert opinion.

One of the best ways to find out the value of your invention is to consult people in your own neighborhood who are in a position to know. If it is an article of jewelry, go to jewelers and ask them if they think it will sell. If it is in the hardware

line, ask the hardware men. Ask them if they will buy the article and place it in their shops for sale when it is offered to them.

Suppose the article is something for use on railroads. Get the advice of men in the railroad shops. They know whether it is practical or not. Suppose it is something to be used in a certain line of manufacture. Ask the factory superintendents what they think of it. Ask these men if they will recommend the installation of your device in their plants when it is placed on the market.

All around there are practical men well qualified to render an opinion. Get all the advice from such men that you can, but do not necessarily be governed by it. Let their opinions be considered only as evidence for you to weigh in trying to arrive at a conclusion as to how much to ask for your patent.

A surer way to find out whether your patented article will sell or not is to put it to the actual test. Have a limited quantity of the articles made—say 1,000—and introduce them into a small territory. For this purpose it is well to get a good salesman, so that adequate selling efforts will be made. His results will demonstrate to you the real worth of your article.

Such a test will give you a pretty good idea of the quantity a manufacturer may expect to sell when distributing it on a large scale. It will guide you in fixing the price to ask for the patent. Incidentally, it will provide you with a good selling argument when trying to dispose of your patent to a manufacturer.

Such a test, you may say, requires a certain amount of capital. It does. If the article is a success, however, the profits from the test sale should more than offset the manufacturing and selling costs.

Most inventors are inclined to value their patents too high. Fix a fair price, remembering that the purchaser is entitled to a good return on his investment. On the other hand, do not snap up the first offer you receive, in the fear that higher offers will not be made later. If the invention is worth while and if the price for the patent is right, the right purchaser can be located.

CHAPTER X

FINDING THE BUYER

From the president of a steel company the head of one of the largest firms of patent attorneys in the country received a letter containing the following statement:

Of our monthly production of 7,000 tons, less than one-fourth goes into what we call finished products, and what we seek are avenues that will absorb all of our raw materials.

Your large experience will have taught you the exaggerated ideas of inventors and the values of their patents and the market which they can reach. Nevertheless, there are many valuable patented articles or inventions which would come within our scope of manufacture, providing the inventor would be reasonable in his judgment and would respond to the commercial advantage of both of us.

From the president of an iron works the same leading patent firm received a letter with this statement:

It occurred to the writer that you might know of some recent inventions which would sell readily to the hardware and plumbing trade.

Our company is an old, established firm, with a well-equipped foundry and machine shop, selling such articles as jack screws, cast-iron sinks, tampers, ash-pit doors, boiler stands, and similar articles to hardware and plumbing jobbers.

Our business is an intensively competitive line, and we would be glad to consider the manufacture of any new product which could be readily marketed to our regular line of trade. If you do not know of any such product, we would appreciate it if you could put us in touch with people who would be in a position to tell us what is available.

Those letters are only two of many that illustrate the desire of manufacturers to get in touch with inventors who have just what they want. There are many inventors who have the

very inventions the manufacturers seek. The trouble is that neither the inventor nor the manufacturer knows how to find the other.

The most obvious way for the inventor to try to locate the manufacturer, of course, is to advertise for him. Whether this is a good method or not depends upon the kind of man or organization he is trying to find. This may be accepted as a general principle: advertising has a wider range than an individual appeal, but it is not so strong.

Suppose the invention you are interested in would appeal only to the mill supply houses of the country. There are about 2,000 of them. You might appeal to them by advertising in the trade magazine it is supposed most of them read. Possibly you will interest one of them sufficiently in what you have to sell so that he will get in touch with you and enter into negotiations.

On the other hand, suppose your invention is a new piece of apparatus that can be used in connection with a number of different kinds of machines: vacuum cleaners, washing machines, ice-cream freezers, dough mixers, etc. If all you want to do is to make one sale—of your patent, that is—advertising in all the trade papers that go to all these diversified lines would be rather cumbersome, to say nothing of the expense involved.

Perhaps your invention is one that could be marketed by a chain-store organization. There are about 8,000 chain stores of all kinds in the United States. While there are trade magazines that reach some of them, they sell such a variety of articles that to try to reach all of them with one blanket advertisement would mean that, so far as the majority of them is concerned, your effort would be wasted. It is better to approach them individually.

If your invention is a novelty or household article which can be manufactured at a cost of a few cents, try Woolworth's or some other series of five-and-ten-cent stores.

If it is in the grocery line, try the Great Atlantic and Pacific Tea Company, the Jewell Tea Company, the American Stores, or one of the other big chains of groceries.

If it can be handled by a chain of drug stores—remember that the drug store of today sells many things other than medicines—try the Associated Druggists' Syndicate, Liggett's, Riker's, or a similar far-flung organization.

If it is an article such as might be sold by a cigar store—this includes shaving articles, games, and other things, as well as smokers' supplies—try the United Cigar Stores, Schulte's, or some such organization.

In other words, if your invention is of an article that is to be sold to the public, select as your prospects the organizations which would be likely to sell the most of the them. If it is something to be used in manufacturing, seek out the manufacturing organizations that would make the most money or save the most by adopting it.

But, you ask, how can I tell what these organizations are? One way is to consult directories. Two good ones that are as complete as any are Thomas's "Register" and Hendrix's "Register." These list articles of all kinds and tell you who makes them. The companies which manufacture articles in the same class as your invention are the companies you want to get in touch with. One or both of these books you should be able to consult in the public library of any large city.

For special groups of manufacturers and dealers special lists are prepared by Polk, who publishes city directories; Donnelly, who publishes the telephone red books of many cities; Trow, Boyd, and several other companies. If they are not already in possession of such a list as you are seeking, they will prepare one for you, telling you in advance what their fee will be.

Another way to find out who the manufacturers are is through various trade and industrial organizations. Manufacturers in many leading lines have combined into mutually helpful organizations, and their memberships generally include the leaders in the particular businesses. To find out what these associations are in any particular field, write to the Chamber of Commerce at Washington, D. C., the Chamber of Commerce of the State of New York, or some similar general business organization.

Incidentally, some of the industrial organizations have special bodies created to investigate inventions and patents. The railroads of the country, for example, have created a joint standing committee with offices in Chicago for the sole purpose of testing out and passing upon all automatic, safety train-control devices that may be submitted to them.

Getting lists of manufacturers naturally will give you the names of many business firms and corporations who will not be interested in your patent, even though what you have to sell them is right in their line. To go after all of them means expense. Time, money, and effort can and should be saved by approaching first the biggest and best of them—the ones that for one reason or another are the most desirable for you to do business with.

If you yourself do not know which of them are the biggest or have the best standing, ask someone who is in the business and who is in a position to give you authentic information. Should you not be acquainted with any such person, consult "Dun's" or "Bradstreet's." If you do not happen to have access to such a reference book of ratings, put the question to your local bank. There you can learn which of the companies you ask about are rated the highest.

Do not be discouraged if the biggest concerns are not interested in your invention. Often the smaller concern is your more likely customer. The steel company whose letter is quoted at the opening of this chapter illustrates this point. The Bethlehem Steel Company, the Bessemer, and other big companies make many of the standard things the smaller company makes. The smaller company, therefore, must have novelties on which it can have exclusive patent rights in order to compete successfully with the larger companies.

If your first prospects, then, do not come through, keep on trying until you have exhausted your list. Then go out and get more prospects. If your invention will pay some company to take it up at the terms you offer, one of the prospects on your list is bound to take advantage of it.

CHAPTER XI

SELLING OUTRIGHT

By this time you have pretty thoroughly analyzed your invention and its possibilities, you have studied manufacturing costs and selling factors, and you have found a man or organization likely to be a buyer. The question now is how best to make your approach.

A personal interview, of course, is to be preferred. If possible procure a personal introduction, and the better the manufacturer knows the man who introduces you, the better will be his mental attitude toward what you have to say. It is even more desirable to have a mutual acquaintance go with you, on your first meeting, if such a thing can be arranged, to insure your being well received.

Lacking a personal introduction, you must resort to a letter in arranging for a meeting, although this often means a little more formality and restraint. Such a letter, while cordial in tone, should be strictly business like and should state clearly just what you have to offer. It should stress the advantages that will accrue to the manufacturer rather than to the inventor. In other words, it should be written with the manufacturer's viewpoint in mind rather than yours. Following is a letter which would be likely to arouse the manufacturer's interest:

231 Main Street
Freeport, N. Y.

Mr. John P. Smithers, President
Smithers Automobile Company
5428 Centre Avenue
Pittsburgh, Pa.

Dear Sir:

You will be interested, I believe, in the very considerable profit to be made from the manufacture and sale of a new vacuum cleaner for

automobile upholstery that is operated by the exhaust from the motor.

This device can be installed in any type of car. Without any extraordinary sales promotion it should sell one million within one year after it is placed on the market. It can be manufactured at a cost of not more than $1—possibly your plant may be able to turn it out for considerably less. At a retail price of $5 it would undersell any similar article. The volume of sales is limited only by the number of automobiles in the country.

This upholstery cleaner is fully protected by letters patent, a copy of which I am enclosing with this letter. I have had made a perfect working model of the device, which I should be pleased to demonstrate to you at your convenience. When you see it in operation you will be convinced, I am sure, of the desirability of entering into negotiation for the patent rights.

May I call and talk it over?

Yours very truly,
William C. Jackson

When you make your first call to discuss the patent, be sure to have all the facts at your finger tips. There must be no hestitation and no apologies; they might be fatal to your success.

Your invention must be perfected. If it is not, put in your time perfecting it rather than in trying to see somebody. The men who are going to pay for your invention very likely are neither mechanically nor scientifically inclined, and if your device doesn't work they will not be interested. It is not enough that only a little additional study and experiment is necessary to make it work. They will make no allowances.

The first impression you make is highly important to the success of your selling effort. If your device is such that it can be shown by a working model, then that working model should be in perfect working condition. You are there to make a demonstration, and the demonstration must be a success if a sale is to be made.

The prospective buyer of your patent will want to know several things about it. These things you must be prepared

to tell him. Questions which he will ask and to which you must know the answers are:

1. Is there a demand for your invention?
2. How big is the demand, and how long will it last?
3. How much competition will it have?
4. Is it practicable?
5. Is it better than things in the same line already on the market?
6. Will it cost less to make than other similar devices?
7. Can it be sold more cheaply than others?
8. Is it fully protected by patent?

The order of the above questions is just about the order in which you ought to take them up with the manufacturer. And you may be sure that the manufacturer probably knows the answers to some of them as well as you do, if not better.

He very likely knows whether there is a real demand for such an invention as yours. In the event that he does not, however, you may be able to convince him that your estimate is correct by showing him some of the results of the analysis you made in ascertaining the value of your invention. Tell him of the cost and profits in the test sale you made, or show him the written opinions you have received from experts. In the matter of how big the demand will be and how long it will last, point to other inventions in the same class that have had a wide and lasting sale.

The manufacturer undoubtedly will be aware of what competition your invention will have to face when it is first introduced. He may hazard a guess as to the possible competition that will follow after it is a success and when imitators try to spring up. It should not be difficult for you, however, to point out the advantages of being the first in the field and the manner in which your patent will protect him from rivals who approach your invention too closely.

If you have succeeded in convincing the manufacturer that there is a real opening for such an invention as yours claims to be, the hardest part of your task should be over. All you have to do then is demonstrate to him that your device is the one above all others that can meet the demand. You have

labored with your invention, and you know it as no one else does. You must make it work now readily and unerringly. Use a working model if that is at all possible. Your demonstration should be such as to prove its superiority over other devices. In fact, you should know as much about these other devices as you do about your own, in order to be able to show to the best advantage the superior merits of your invention.

As to the cost to manufacture, let your prospective purchaser know of the estimates you have received from other manufacturers. He will know what he can make the article for. Tell him, also, what facts you have learned from your study of conditions in the trade and what prices similar articles bring.

In stating your case you must, above all, be confident. You must know your facts, and there must be no doubt about them. There must be no doubt in your own mind that your prospective buyer is going to be benefited by purchasing your patent, for any such doubt would reflect itself in your sales talk and spell disaster for you.

At the same time you must be conservative. It is all very well to be enthusiastic, but it is far better to understate your case than to overstate it. Should the manufacturer find you exaggerating, even in some matter of minor importance, he will be inclined to take all of your claims with a grain of salt.

Let the price be the last thing you discuss with the prospective purchaser of your patent. By the description you have given him of your invention or by the working model you have shown him you have aroused his interest. By demonstrating to him that your invention will work and by giving him facts and figures that show conclusively that your invention will make a handsome profit for the manufacturer you have aroused his desire to own the patent rights. There is no doubt now that he will buy if he can do so cheaply enough.

Naturally, you and he will not agree on the price at once. Most inventors value their inventions at large round sums—a million dollars or a hundred thousand. Actual sales at such prices are unusual. You will be inclined to overestimate the reasonable value of your invention because you are familiar

with its possibilities and are thinking terms of sales and profits. The manufacturer is likely to place the value too low, because he is thinking in terms of the risk he is taking and of the many expenses he must undergo if he is to take hold of it.

Don't haggle too much over the price. If the manufacturer makes you an offer that is reasonable, accept it, even though it is not quite so much as you think he would give if he were more sure of the profits to be made. It is true that the manufacturer after buying your invention for $10,000 may put the device on the market for a year or two and then sell the patent to another manufacturer for $100,000. That does not by any means prove that you have sold out too low. As a proven success your invention might well be worth $100,000. As an untried experiment, a gamble, $10,000 might be too high a price.

On the other hand, don't snap up the first offer that is made to you in the fear that there will be no others. If the manufacturer names a price that seems ridiculously low, do not have any hesitation about refusing it. You can be both reasonable and firm, ready to concede something for the sake of coming to terms, but declining to barter away your rights for a song.

An inventor sometimes finds himself in straightened circumstances, his funds exhausted in developing his invention, and it is necessary for him to make a quick sale at any price. To let a prospective purchaser know of this state of affairs is disastrous. The manufacturer in such a case will use the inventor's distress to force him to part with his patent for a paltry sum. Never let it be known that you need to sell your invention. Even if you are not prosperous, you must appear so in order to deal with the manufacturer on even terms.

An inventor who sells or assigns a patent is known as the assignor. The one to whom the sale or assignment is made is known as the assignee. The assignor must sign a deed of assignment in order to convey a legal title in the patent to the assignee. Usually the purchaser pays the cost of preparing this document. It should be registered in the United States Patent Office within ninety days after its date of execution in

order to be valid against a later assignment should a later one be made.

The inventor, in selling a patent, should be careful in signing the deed of assignment lest he later find himself bound by guaranties he never thought of. It should be clearly stated in the document whether it conveys the patent rights for the whole world or only the rights in the United States. It should state clearly whether this particular patent only is conveyed or whether it includes other patent applications at present pending or which may later be granted pertaining to the same line of invention. It should state to what extent, if any, rights for improvements on the invention are conveyed by the assignment.

CHAPTER XII

TERRITORIAL RIGHTS

As a general principle, the more trouble you go to to make money out of your patent the greater your profit will be. Many an inventor, fearing that he is not a good enough business man or being willing to sacrifice amount of gain for the sake of a quick and easy profit, is glad to sell all the rights to his invention in one lump. Better results, however, often are obtained by selling piecemeal, that is, by assigning territorial rights.

The entire country can be canvassed in this way, and the division may be made along any lines desired. You may split the map up into sections of the country, such as the New England states, the Middle Atlantic states, the Southern states, and so on, or you may sell your rights state by state. You may even divide it so finely as to assign county rights or rights for certain cities.

The aggregate of prices for all of the divisions, by whatever method you choose, should amount to considerably more than the price you would ask for your invention if you sold it as a whole. The total states' rights of the country, for example, should be about one-half more than the price if sold in one lump. The smaller the subdivisions are, the greater should be the aggregate price.

Naturally, the same principles of salesmanship should be followed in selling territorial rights as would be followed in selling to a single buyer. Your invention should be in the best possible shape; you should be able to discuss its merits in the minutest detail; you must look and act business like, giving no indication of any kind that you are not possessed of ample means; and you should be ready to accept or reject promptly any offer made.

One advantage that you possess when you sell territorial rights is that the first sale of a section you make develops you into a better salesman for the later prospects whom you approach. You see the weak points and the strong ones in your argument with the first buyer, and you know just what to concentrate upon when entering into negotiations with the second man. Another advantage is this: every sale of a territorial right is a strong selling argument for the rights in other territories. If you can say, "Doe and Company have bought the rights for this invention in New York, and Richard H. Roe has bought them in Ohio," it will be one of the best points you can make in your selling talk to a manufacturer in Illinois.

In making an estimation of the prices to ask for the patent rights in particular territories, there are various factors to be considered. You should bear in mind the application of the invention to the specific section. Ice skates, however excellent, would not find much of a market in Arizona, nor would electric fans in Alaska. A head lamp for miners would not sell in a region where there are no mines, just as a suction milker would not go well anywhere but in a dairy-farm region. If the article itself will not sell, the patent rights to that article are, of course, without value.

Manufacturing facilities, also, must be taken into consideration. The right to manufacture an article made of steel would not be worth very much in a region where there are no steel mills. In the same way the materials entering into the article should be a factor. Even though the manufacturing facilities may be at hand, the ingredients of your invention may have to be transported from such a distance that the freight rates would raise the cost to the manufacturer considerably. This would mean, of course, that the price you could receive for your patent rights in that section would be just so much less than if all the conditions were favorable.

The character and habits of the people in a particular locality are an important factor in determining the value. If, for example, you had a hair-straightening iron, something that was sure to take the kinks out of the wooliest hair, it might be

worth a lot in Birmingham, Philadelphia, Washington, or some other large center of negro population, while it might fail utterly in San Francisco, Portland, or Buffalo, where the demand is for effective hair curlers rather than for hair straighteners.

Generally speaking, miscellaneous mechanical devices, typewriting machines, calculating instruments, and the like are most valuable in the North and the East, while mining tools, farm tools, and such implements go better in the West, and cotton seeders, gins, and pressers apply particularly to the South.

It is a general rule that states and counties with large cities provide a richer field for the marketing of new inventions than do communities with an equal population that is predominantly rural. No matter what the reason—whether it be that people in cities have more money to spend, are more ready to accept new ideas, or have better opportunities to see and purchase—the fact remains that city dwellers are better prospects than their country cousins for the man who has something new to sell.

From the foregoing statements it will be seen that the value of an invention for any particular section depends upon the kind of invention it is. Assuming, however, that the device is one which will be in equal demand by all classes of people, wherever they live, and can be manufactured in one state as readily as in another, the population may well serve as a basis for estimating the price to ask for the regional patent rights.

The following table in such case shows approximately the relative values in each state for patent rights which you estimate are worth $10,000. Note that the aggregate of the state prices is a little more than one-half above the single price of $10,000. The same scale can be used for inventions valued at any amount.

New England states:	
Maine	$ 120
New Hampshire	70
Vermont	50
Massachusetts	560
Connecticut	220
Rhode Island	100
Total	$ 1,120

Middle Atlantic states:	
New York	$ 1,650
Pennsylvania	1,130
New Jersey	500
Total	$ 3,280
South Atlantic states:	
Delaware	$ 30
Maryland	220
District of Columbia	60
Virginia	340
West Virginia	240
North Carolina	400
South Carolina	260
Georgia	460
Florida	160
Total	$ 2,170
Southern states:	
Kentucky	$ 440
Tennessee	390
Alabama	390
Mississippi	270
Louisiana	270
Texas	700
Oklahoma	350
Arkansas	260
Total	$ 3,070
Central states:	
Ohio	$ 750
Indiana	400
Illinois	1,000
Michigan	500
Wisconsin	400
Minnesota	390
Iowa	350
Missouri	500
North Dakota	100
South Dakota	100
Nebraska	210
Kansas	290
Total	$ 4,990

Western states:	
Montana	$ 80
Wyoming	20
Colorado	150
New Mexico	50
Arizona	40
Utah	70
Nevada	10
Idaho	60
Washington	210
Oregon	120
California	520
Total	$ 1,330
Grand total	$15,960

Patents for household novelties especially lend themselves to sale by territories. In fact, the patent for any article that can be sold to a vast proportion of the population can be marketed successfully by this plan of granting to one man or company the exclusive right to manufacture and sell in a particular section.

In trying to dispose of these regional monopolies a good method is to begin with the more valuable portions and to keep on selling territories until it ceases to pay. Usually it is advisable to accept any reasonable offer for a small right, even though it be below the price you fixed at the outset, for there is plenty of territory remaining, and considerable time might be wasted in trying to find another purchaser in the same community. It must be remembered, too, that the buyer may make such a favorable showing with your invention that it will aid your sales in other places and even aid you to procure higher prices than you might be able to get otherwise.

Some owners of patents retain agents to dispose of the territorial rights. There is no objection to such a method, providing you can find an agent who is both reliable and efficient. One-third of the selling price is a reasonable fee for such representatives unless you can show them that the patented article sells readily.

The decision to sell as a whole or by sections must be determined, after all, by the nature of the article and by the condi-

tions of manufacture and use. It is good only where there are factories in each section and the trade of each is limited to that section. It also must be remembered that such a method takes considerable time—time in which another invention in the same field may appear in some of the territories you are trying to break into and provide an obstacle which you may find difficult to overcome. If, however, the conditions are favorable, selling by sections will reward the added effort.

SHOP RIGHTS

By their very nature some patents can be made to pay best by disposing of shop rights. This is especially true in the case of manufacturing processes. There is a disadvantage in such a system, because when a shop right is sold the monopoly ceases to exist and the invention becomes unsalable.

In such cases it is a good idea to segregate the various lines in which your invention may be used. Often an invention can be put to several different uses and can be employed to advantage by different kinds of manufacturers. Take up each kind separately. For example, your patent may be for a mixing device which could be used equally to advantage by a large bakery, an ice-cream manufacturer, and a manufacturer of tooth paste. None of these are competitors, and probably each would be entirely willing to have the others use your process. Grant each a license separately, being sure that your instrument is so drawn as to place on each manufacturer the limitations you want to impose upon him. If you were to assign him the patent rights completely and unqualifiedly for his territory, he could in turn parcel out to others the rights for their particular lines and so derive a profit that should have been yours.

Always study your invention to find new uses for it—uses you never thought of when you were working it out. Thus you can often double or treble the return on it you otherwise would receive.

A manufacturer will sometimes purchase a patent not because it has any direct commercial advantage for him, but

because he can use it in combination with other inventions to produce an entirely new device. Often some comparatively simple contrivance will embody patents obtained from a dozen different inventors, none of which would be of value standing alone.

CHAPTER XIII

ROYALTIES

The most popular method of making a patent pay is the license and royalty plan. It usually is to be preferred to any other method. This, of course, assumes that the invention is going to make a financial success for somebody. If you have any doubts about the merit of your invention, then sell it outright for what you can get and be rid of it as quickly as possible. If, however, you have confidence in the future of the product of your ingenuity, if you are willing to take a chance, then by all means seek to license the patent rights to a manufacturer on a royalty basis.

Such leasing involves a contract between you, the inventor, and the manufacturer. By this contract the manufacturer receives a license to make your article or use your process, and in consideration for it he agrees to pay you a certain specified sum as a royalty for each article he makes and sells which embodies your patented improvement.

In making a royalty agreement you must realize that you are taking a risk. There is always the possibility that both you and the manufacturer may be mistaken in the profits that will be made. More than this, however, is the possibility that your confidence in the integrity and ability of the manufacturer may be misplaced.

An unpleasant feature about royalty contracts, which sometimes may make them less desirable than outright sales, is the fact that they make it necessary for you to watch the business closely. This you are often unable to do.

The one alternative is to use the utmost caution when entering into a royalty agreement.

Before making a royalty contract investigate closely the character, rating, and capabilities of the manufacturer you are contemplating doing business with. Find out, also, what his

motives are in securing the exclusive rights to your patent. It may be he is securing them not for the purpose of pushing the invention, but in order to prevent others from taking advantage of it—to keep it out of the market for the benefit of some other device it would supplant. Many an inventor has come to grief through making iron-clad contracts with manufacturers who offered attractive royalties for just such purposes.

Remember that the amount of money you receive does not depend so much upon the size of the royalty as it does upon the quantity of the articles made and sold. No matter how big the royalty terms are, if there are no sales there are no royalties. No matter how small the terms are, if there are enough sales the royalties will amount to a considerable sum. The manufacturer who will sell the most articles which incorporate your invention, not the one who makes the most glittering offer, is the one with whom you should affiliate.

There are a number of ways under the license and royalty plan by which manufacturers compensate inventors in return for the patent rights. One of the most common methods provides for the payment of a flat sum for a specified quantity, such as one cent on each article sold, a dollar a thousand, or the like. Or the percentage method may be used, by which the manufacturer agrees to pay a percentage of the net profits on the sales. This net profit takes into consideration the selling cost and overhead expenses as well as the straight manufacturing cost. Or the royalty may be a percentage of the difference between the cost of manufacturing and the sale price, that is, the gross profit.

Often the royalty rate varies with the quantity sold—so much per article or such a percentage on the first hundred thousand, so much on the second, and so on. Or the rate may increase or decrease from year to year, or any one of a number of other complexities may be introduced, according to the provisions of the royalty agreement.

To determine just what royalty rate you may reasonably expect the following method may be used: Estimate the number of sales of the patented article that will be made. Estimate the profit the manufacturer will make on each

patented article or on each article containing the patented improvement. Ask about twenty-five per cent of the net profits.

Another method is to ascertain what the retail selling price of the patented article will be. Figure that the royalty should be between one-twentieth and one-tenth of that.

Either of the above methods should give you the approximate figure to expect for the exclusive rights to your patent. For non-exclusive rights you can expect only about half of what you would get for the exclusive rights.

In the long run it may be possible for you to get more for non-exclusive rights than you could for exclusive. This depends upon the nature of your invention. Goodyear, inventor of the process for vulcanizing rubber, for example, divided his patent into a number of different rights. To one company he leased a license for his process in the making of rubber hose, to another for clothing, to another for shoes, to another for combs. Each of these manufacturers paid him a royalty. Lyall, the inventor of the continuous loom, leased rights to manufacturers of bags, of corsets, of sheeting, of carpets, and of various other articles.

It is very possible that your invention will apply to several diverse lines. A brake may be suitable for automobiles, railroads, agricultural machinery, and bicycles, in which case you could lease on a royalty basis to a manufacturer in each field, granting to each only the rights he is particularly interested in. In this way you could multiply your royalties.

One method of deriving a profit, although it requires capital, is for the inventor or the owner of a patent to have machines built and oblige the users to pay a rental on each machine used or a royalty on all goods produced by the machine. Sometimes companies are organized to make the machines and employ salesmen to place them out on a rental basis. Such was the method used by the United Shoe Machinery Company in building up a gigantic business.

The inventor sometimes finds it difficult to understand why a manufacturer should seek control of a patent and then fail to make use of it. He sees his device as a marked improve-

ment over existing articles of the kind, one that can be made more cheaply, sold at a higher price, and used in greater quantities, and, therefore, he reasons, it should be to the interests of the manufacturer to push it, not only for the inventor's sake, but for his own.

This is not necessarily true. The manufacturer may have an established, profitable business in a similar article. To make this article may require elaborate, costly machinery which would have to be scrapped and replaced by other expensive equipment if the new article is to be introduced to the public. If he does not secure the rights himself, some other manufacturer may and thus ruin his business. If he can get exclusive patent rights on a royalty basis and produce none of the patented articles, the safety of his business is assured, and it costs him nothing.

The reluctance or the delay of corporations in putting new inventions into operation sometimes may be justified. Consider, for example, the case of the automatic telephone. The system in use, requiring human operators, represented an investment of many millions of dollars. Were the improved automatic system to be installed at one swoop millions of dollars worth of equipment would have to be discarded. Not only would the thousands of stockholders have suffered a heavy loss, but the public would suffer, too, both in the confusion resulting from the revolution in methods and in the increased rate that would have had to be charged to sustain the sudden added cost. Gradual replacement by the new system as the old equipment deteriorated was the only solution.

The situation in many cases, however, is not so justifiable. The vaults of a number of corporations are said to hold legal documents securing to them the rights to patents which are destined never to see the light of day. If the inventor in such a case has sold his patent outright for a flat sum he has little reason to complain. If, on the other hand, he has leased the patent rights on a royalty basis with no protecting qualifications, his lot is a hard one indeed. Many an inventor has been deprived of all hope of profit from his invention in this manner.

Your only safeguard in leasing the patent rights on a royalty basis lies in the terms of your agreement. See to it that they bind the other party to do certain things in the way of pushing sales, that the necessary tools are made at his expense, that the manufacture must start within a specified time, and, if possible, that you be paid a royalty in advance. In other words, so fix the terms of your agreement that the manufacturer will be the loser if he fails to work for your interests.

Do not barter away the manufacturing rights to your patent merely in exchange for a royalty on each article sold, without any further qualifying terms. There must be some certainty that an honest effort will be made to manufacture and sell. Endeavor to persuade the manufacturer to guarantee that the royalties shall aggregate a certain stipulated minimum amount and that he will pay that amount whether any sales are made or not.

The manufacturer may not be willing to give you such a guarantee. He will, however, probably be willing to agree that if the sales do not reach a certain volume you will have the privilege of canceling the agreement and revoking the license.

Under a contract which provides for such reversion you will still be safe, even though the manufacturer fails. If the manufacturer refuses such terms, the chances are he is not a safe man for you to intrust your patent to. In return for his agreement to use due diligence in prosecuting the manufacture and sale, it is customary for the inventor to pledge himself to do whatever lies within his power to make the invention a success. Such an agreement is the basis of a real, mutually beneficial partnership.

In other respects, also, you should have your contract provide for adequate protection of your interests. In the event that you are not a stockholder in the corporation which leases your patent on a royalty basis, it would be advantageous to insert a clause permitting you to inspect the company's books. Thus you can be informed from time to time of the manner in which your invention is being handled.

Offering as they do the maximum opportunities for profit, royalty agreements provide also the widest latitudes for dis-

agreements and the greatest temptations for sharp practices. The safe thing to do in all cases is to seek expert legal advice at every step, so that there may be no loopholes through which your profits may be lost.

CHAPTER XIV

SELLING THE PATENTED ARTICLE

Foregoing chapters of this book have discussed the making of money directly from the sale or rental of patent rights. This chapter has to do with making money indirectly from the patent, that is, making a profit out of the patented article. It is the method which should provide the maximum return, for it gives to the inventor not merely that portion of the profits which the manufacturer would pay as a purchase price or royalty, but all the profits the manufacturer himself would make. The size of the possible profits is the advantage of this method of making a patent pay. The disadvantages lie in the time, energy, business ability, and capital that may be required.

Time and energy the inventor who turns manufacturer must have in unlimited amount. Business ability he must possess to at least a fair degree, or else must have a partner who is a practical business man. The amount of capital that will be needed depends upon the nature of the article and upon the size and rapidity of growth that is to be expected of the new enterprise.

Some inventors have started with almost no capital. Such a course is practicable when the cost of materials and of manufacture is inconsequential, especially when the labor can be done by the inventor himself. A butler employed by a certain wealthy man, for example, invented and patented a little device by which flowers set in a bowl or dish could be made to stand upright or at any desired angle. In his spare time he made as many of them as possible with his own hands and in his home. Then he took them around to one florist after another, offering them for sale. When the florist would not buy them outright he left them anyway, to be paid for

when the florist had disposed of them to customers. Soon there were repeat orders from the florists, and other florists, department stores, notion shops, and the like began taking up the novel flower holder. It was not long before he developed a profitable business.

Sometimes businesses of huge dimensions are built up from just such small beginnings. Robert Chesebrough, for example, who amassed millions through the manufacture and sale of vaseline, in his early days went from door to door selling his patented petroleum jelly. After a time he began to introduce it through drug stores; then, as the demand grew he started supplying the drug stores through jobbers, and he was well on his way to making a fortune.

A young woman was employed as personal maid by one of the leading society matrons of New York. She devised a reducing corset for her mistress with results so satisfactory that she had the garment patented and soon began making them for her employer's friends. The reputation of her invention spread, the demand increased, and after a time she opened a shop in Fifth Avenue for the sole purpose of selling her patented garment. She since has become one of the leading corsettières of the metropolis.

Your invention may be such that it is not possible for you to make the article yourself. In that case a manufacturer can always be found to make the article for you. The inventor of a pipe smoker's device which has been selling for twenty-five cents in a chain of cigar stores has the articles made for him at a cost of five cents each. He sells them to the cigar-store chain organization. He has invented a number of things, but on this one alone he has cleaned up a fair-sized fortune.

But, you say, my invention is such that it can be made only in a fully equipped factory, and I have neither a factory nor the money to pay a manufacturer to turn out any quantity of the articles.

That is not necessarily an obstacle. Go out and get orders. Call on jobbers, or retailers, or even on housewives, and turn over to the manufacturer such a volume of written orders as will assure him that you will be able to pay him when your

customers pay you for the goods. Upon such evidence of demand the manufacturer will not hesitate to make the articles for you on credit. It will not even be essential that you have enough orders to cover the entire quantity you want manufactured. If the number is great enough to prove to him conclusively that there is a ready market that will be sufficient for him.

One inventor of a minor improvement in straw cutters took a model through a number of the Western states and in eight months returned with $40,000 in cash and notes. In about fifteen months an inventor of a grain threshing and cleaning machine made enough sales to bring him in $60,000.

It is always well in getting orders to have a sample or model made which you can show to prospective customers. But even this may not be entirely necessary. Without ever having had a single article made and without having entered into negotiations of any kind inventors have solicited and obtained large numbers of orders by advertisements in trade papers and by direct mail.

Such practice is not to be recommended, however. If you cannot have the articles made before you try to sell them, at least see your way clear to having them made without delay as soon as the orders are received. Otherwise you may suffer embarrassment and loss through your inability to make deliveries, to say nothing of being suspected of acting in bad faith in soliciting orders.

The most difficult part of the task of introducing a newly invented article is to get the public to give it a trial. One way that has been tried with success is to give a personal demonstration to crowds of people. Exhibitions of its use may be made in store windows, in department stores, and the like. This is especially good in introducing small articles. Make a deal with the store proprietor whereby he will make a substantial profit on your patented articles sold over the counter. Display it at industrial expositions, advertise it, in short, do everything your ingenuity can suggest to arouse the public's interest.

For the public to continue to use it after a sufficient trial and for satisfied customers to recommend it to their friends you will have to rely upon the merits of the device.

It is highly important that the patented article be made as attractive in appearance as possible. The size, the shape, the finish, and even the kind of container often have a marked effect on the distribution. When your distribution to the consumer is made through middlemen or jobbers, a convenient size, a pleasing shape, and a good-looking finish are often the deciding factors between two competing articles which work equally well and which sell at about the same price.

Naturally, the price is an important factor in determining the readiness with which the public will take to the new article. To a great extent the price will depend upon the quantity produced. Manufacturing in large quantities will make the cost lower to you, and this lower price you can pass along to the consumers.

There are a number of things, however, which may justify a seemingly high price. This would be the case if the article is designed for a large number of uses. The quality of the ingredients may make the cost high. If it is difficult to ship or to handle the article the price necessarily would have to be high. The cost of transportation, the distance from the place of manufacture to the place of sale, the facility with which storage may be had, all have their effect on the price.

Taking all these things into consideration, let your price be as reasonable as you can make it and still derive a fair percentage of profit, for, other things being equal, the lower the price, the more you will sell and the greater will be your return in dollars and cents.

The fact that there may be a real need for your invention is not by any means a guarantee that it will receive a ready welcome when placed on the market. Many of the most notable inventions have met with an amazing indifference on the part of the public when they were first introduced. The most vigorous kind of sales effort was necessary before they began to show any signs of success. Elaborate advertising campaigns had to be resorted to.

Many an inventor, however, is unable to lay his hands on funds for advertising. All his available resources may be needed for manufacturing. Such an inventor is sometimes marketing the patented article himself only because he has been unable to dispose of the patent. In such a case it is often a good plan to begin to manufacture in a certain locality and when the business shows progress and profit, sell out the business, granting the purchaser a license to manufacture under a royalty agreement.

An Illinois inventor took out a patent on a farm implement and induced a neighbor to join him in manufacturing it. It paid. Soon he sold his interest to his partner with a license under the patent. Then he started manufacturing in several other places, one after another, selling out and granting a territorial license in each place as soon as the business prospered. In still other places, where he was unable to work his invention, he sold licenses. In this way he realized a substantial fortune, making as much profit from each one of the many businesses he established as he would have from the sale of the patent outright.

Remember that a business that is on a paying basis always can be disposed of readily.

One of the most usual ways to introduce a new device is to give it to specialty salesmen who call upon the trade and take orders from the retailers. These orders are filled by jobbers.

When a consumer demand has been established for the newly patented article the dealers will want to be assured that the supply will not be interrupted. Unless they believe that they can get enough of the article as long as they want it, they will not be willing to start its sale. Otherwise they would be subject to losses. By helping to create a demand and then failing to meet it they would incur the ill will of their customers, and by dropping existing lines in favor of a new one they would be out the profits they would have made normally.

With the demand being good and the dealer doing his part to meet it the manufacturer's job is to keep on producing the article in adequate quantities. Just what quantities will be

adequate he must estimate in advance from the trend of the sales being made.

Now comes competition. This very phase of commerce, which stimulates invention and which has made the opportunity for the new product, now begins to work against that product once it has become a success. To fight it the manufacturer must keep his product up to the highest possible standard of excellence. The article must be kept up to date, too, lest some competitor bring out some other article that is a little better, or even just as good. The inventor should constantly be seeking for improvements he can incorporate in his patented article.

When two articles are of substantially equal merit the competition is likely to revolve around their prices. Fortunate is the manufacturer who has set a reasonable price on his product. Competition, after all, is really the rivalry between manufacturers to give the public the greatest value for its money, a condition which in the long run benefits both manufacturers and the public.

It is only natural that patents should depreciate in value as they grow older, not only because they have fewer years to run, but also because as their novelty wears away the conditions which made them desirable are passing. The extent to which they depreciate in value should be estimated in any appraisal of the business based on patent rights.

Depreciation usually is greatest in the early years of a patent, and it is in these years that the greatest profit is made. Many patents have lost nearly all their value after the tenth year. As to just how long your patent will be of value it is impossible for you to determine with exactitude, but it is well to realize that its end is due to come sooner or later and to take measures accordingly. It is a good plan to maintain a reserve fund to take care of patent depreciation in the same way that reserves are established for buildings and equipment.

By no means are the inventor's and the manufacturer's opportunity limited to the United States. The direct profit from selling an increased number of articles is only one of the things which often make a foreign market desirable. Your

invention, of course, should be placed on sale in the United States first. When it is evident that it is on the way to becoming a success here, have it patented in Canada.

For all practical purposes Canada is a part of the industrial market of the United States. In selling the Canadian patent outright you should not ask more than one-third the price at which you value the United States patent. A favorable disposal in Canada should be easy for any patent that has demonstrated its worth in this country.

Before taking out a patent in another country be sure your invention will prove practicable there. Study local conditions. A typewriter, for example, whose keyboard could not be adapted to the thousands of characters comprising the Chinese written language would not be worth patenting in China. Before trying to break into any foreign market make as thorough a study as possible of all the facts concerning it. Valuable information may be obtained from the United States Department of Commerce or from the consuls representing the various foreign countries.

One advantage of selling abroad is that the manufacturer may be assured of a demand which, though diversified, is steady and continuous, especially when the distribution is wide. If there is a slump in one country there may be a boom in another. The more countries the manufacturer supplies the more even his keel is likely to be kept.

Another advantage in selling abroad is that the manufacturing costs are cut. To turn out enough articles to supply the domestic demand the manufacturer must maintain a plant capable of producing considerably more than that quantity. It is a fact that a relatively small number of factories are kept running up to capacity. If the manufacturer can find a steady market which will enable him to keep producing at full capacity, he can produce more cheaply and sell his goods both at home and abroad for lower prices. This tends to strengthen his hold on both markets.

CHAPTER XV

PATENTING ABROAD

The story is told of a simple little invention which has revolutionized a daily habit of millions of men and has made a multimillionaire. The manufacturer began a world-wide selling campaign and in each country where he sought to sell the device he applied for patent protection. In most foreign countries he was successful, but in Germany the Patent Office refused to issue a patent to him on the ground that there was not sufficient novelty in his invention. The result was that German manufacturers made a device identical in design with his. Not having to pay transportation charges or import duties, and being able to manufacture at low cost, they sold his style of device for a ridiculously low figure. In order to do any business in Germany the American was obliged to cut his price to one mark—about twenty cents—although in America the article was selling widely to the public at five dollars.

This man's German experience was unfortunate, due to no fault of his own, of his invention, or of his patent attorneys. It would have been just as unfortunate if he had neglected to seek proper protection abroad—a matter which is not so easy as one might think, for each country has its own method of handling patent applications, and many of them are very different from the method used in the United States.

Whether you should patent your invention abroad or not depends upon the market for it. If it meets a universal need, if it is something that will be received in one country as well as in another it might be wise to patent abroad. It is well, however, to consider first what facilities you have or are likely to have for foreign distribution, or, in some cases, for foreign manufacture. Let your first consideration be one of merchandising and the second one of protection.

Merchandising considerations will in many cases be found far different from conditions in the United States. They may make selling conditions more unfavorable abroad. Such would be the case with a patented game-board apparatus for playing baseball on a table in the home. On the other hand, they may be more favorable abroad. This proved to be the case with a heatless hair curler; in America where electricity is available almost everywhere and electrical curlers seem to be preferred, it made no particular success, whereas in Japan all the straight-haired girls who saw the curler wanted one.

The general statement of commerce in a particular country has much to do with your decision as to whether it will be worth while to apply for a patent there. If business is bad and is likely to be bad for years to come, why bother with a patent? In the first place, the likelihood of your making a profit is lessened, and, in the second, there is less likelihood of attempts on the part of native manufacturers to simulate your product.

Your invention may relate to a particular industry. The circumstances peculiar to that industry in any one country will affect your decision regarding patenting there. The size of the population and the amount of money it has are also to be considered. Are there enough people there who will be willing and able to buy your invented article at a price that that will show you a profit? Are there high customs duties which will affect your importation of the article? Especial consideration should be given to the kind and extent of the competition your product will encounter in the particular country.

It is often a good plan to include manufacturing countries when deciding what foreign countries to take out patents in, even though you do not intend that any of your goods shall be sold there. You should do this so that you may not have competitors in your export business to non-manufacturing countries which may import your article.

When you get a patent in the United States, it runs for a full term of seventeen years. In many foreign countries, including Great Britain, there are systems of annual taxes which must be

paid to keep the patent in force until the full time has elapsed. A patent, it is reasoned abroad, becoming better known and appreciated, perhaps even amounting to a necessity, in the latter part of its term, is worth more than in its early years. At first an invention requires considerable time to show a profit. Later there is not only the direct income from the manufacture and sale, but there may be royalties from other inventors who make improvements and must obtain a license from the original patentee to use such features of his invention as are necessary to make their own inventions workable.

It is to the advantage of the public that a patent revert to public ownership as soon as possible. If the inventor abroad does not pay his annual fees, his patent lapses. If his invention is increasingly successful, he is, of course, glad to pay the fees and keep his patent to the end of the term. If the invention is not a success, it is no hardship to let the patent lapse.

Foreign countries differ widely in the limitations they impose upon inventors, especially on these three points—the length of the term of the patent, the requirements that the patent be worked, and the imposition of fees for renewal. In France a patent runs for five, ten, or fifteen years, as elected; in Mexico for either one or twenty years, with the privilege of extending the twenty-year term another five years; in Germany for fifteen years; in Great Britain sixteen years; in Canada eighteen years; Belgium twenty years; and so on. If patents in these and other countries are obtained after a United States patent, however, they will usually expire with the expiration of the United States patent.

In every country there are many inventors who patent their inventions and then do nothing with them. Sometimes they do this because they see no way of making use of their inventions or of turning them to commercial advantage. Sometimes the patent is used not to advance industry but to stifle advancement. This would occur in the case of an inventor selling his patent to a manufacturer, who locked it up in his safe and kept it merely as a defense against possible competition. Whatever the reason for having the invention lie idle, whether it be from negligence, from inability to commercialize, or from

some ulterior motive, makes little difference so far as the public is concerned. The public derives no benefit from the invention.

The patent system in the United States provides no remedy whatever for such a situation, but in some foreign countries a patentee is obliged to bring his invention into public use within a definite time or have his patent revoked. In some countries, also, having brought the invention into public use, he may not cease using it for longer than some definite period of time. In some countries, if he fails to work his invention within a certain time, he may be compelled by the courts to grant a license to use it to some native manufacturer who desires to take advantage of it.

It is assumed that when you take out a patent in a foreign country you will take steps to work it at your earliest opportunity in that country. If you find that you are unable to manufacture the invented article yourself, then try to find a purchaser or a licensee for your patent. Make this effort in plenty of time so that if you find a purchaser or licensee who is willing to manufacture or use your invention he may do so within the time limit provided by law.

Here in America we are accustomed to consider an inventor one who makes a new discovery or originates a new method or device not previously known anywhere. Such is the idea in most countries, but not in all. In Great Britain a somewhat extended meaning is given to the term in the eyes of the patent law. There the term "inventor" may include not only the originator of the invention, but the one through whom the invention, not previously known in the realm, is brought into the country. Indeed, the Latin origin of the word signifies "one who comes in."

Theoretically, in every country in the world the man who is entitled to a patent is the "true and first inventor." The United States, however, seems to be about the only country in which this principle is strictly adhered to; that is, it is the one country which places a strict and narrow interpretation upon the term. In other countries it is reasoned that no benefit results to the public from an invention so long as it is kept secret; the benefit comes only when the invention is disclosed.

The true and first inventor, therefore, is not presumed to become such until he has made a disclosure of his invention. This disclosure may be made by publishing a description of it, by making or selling it, or by some other method. Applying for a patent is considered equivalent to disclosing the invention to the public. Reasoning thus, foreign countries prefer the first applicant for a patent to all subsequent applicants, even though the later applicant may in reality have been the first actual inventor.

While in the United States patents are applied for in the name of the inventor, it is allowable in many foreign countries for assignees of the inventor to apply in their own names. In some of these countries it is necessary for the assignee to show proof of the assignment.

How much it will cost to obtain a foreign patent depends upon the fee of the foreign patent attorney, the actual government filing fees, and the cost of preparing the necessary documents for filing at the particular patent office. All these, of course, vary with the country in question. In most foreign countries the government issues a patent at the risk of the applicant, without making any examination such as we have in this country. It is necessary, therefore, that a reputable patent attorney be retained. The attorney, by the way, will represent you not only while you are applying for a patent, but throughout the life of the patent. You will recall that the foreign government takes a more active and continued interest in your patent than does the American government. Annual fees and working requirements are evidences of this.

You probably will not be well acquainted with the qualifications of any particular foreign patent attorneys. Rather than retain an attorney by a hit-or-miss method or as a result of a meagre investigation of his standing, it is suggested that you leave his selection to your patent attorney in the United States. You can deal with your regular patent attorney conveniently, and he can cooperate effectively with the representative abroad. This will not be any more expensive than dealing directly with the foreign patent attorney, for the mutual interchange of business between attorneys in this and other

countries has been worked out in such a way as to place no additional expense on the inventors.

Most foreign applications made by American inventors are filed under the terms of the International Convention for the Protection of Industrial Property, entered into by a number of the leading countries of the world. The original member nations made these terms in 1883; the United States signed in 1887. Amendments have been made from time to time.

By the terms of the convention, or treaty, the subjects of each of the contracting states enjoy in all the other member states the same advantages with respect to patents that those other states accord to their own subjects.

Among other terms of the convention, provision is made whereby any person who applies for a patent in any one of the convention countries thereby secures a period of twelve months within which he may file an application for a patent in any of the other convention countries. With all such applications the protection dates from the date of the first application. Suppose, for example, you file an application for a patent in the United States and an application in Belgium nine months later. In the meantime some Belgian citizen has filed an application for a patent in Belgium on the same invention. Your application would be given priority.

The time limit, however, does not bar an inventor from obtaining a foreign patent at any subsequent time, providing he can meet the legal requirements of the particular country.

The following paragraphs deal with the special features of patent laws and procedure in a number of the individual foreign countries.

ARGENTINA

In Argentina patents for invention are granted for five, ten, or fifteen years as the applicant chooses. If a previous foreign patent exists, the Argentine patent expires with the foreign patent and in any event is limited to a maximum of ten years. Precautional patents, granted for one year, are renewable yearly. Their effect is such that if, during their term, another person applies for a patent on a similar invention, the holder of

the precautional patent is notified and within three months may oppose the issuance. Patents of addition are granted for a maximum period of ten years, or for the duration of the principal patent if that should be less than ten years. The Commissioner of Patents, however, may establish a longer term if the principal patent is half expired or in the event that the improvement lessens the time, risk, danger, cost of production, etc. by one-half.

When a patent is sought for ten years or less the Commissioner may rule upon its patentability. His decision may be appealed to the Minister of Agriculture within ten days. When more than ten years is asked for and the Commissioner believes the invention to be exceptionally meritorious, he may refer it to the Minister, who decides whether or not to issue it for the longer period. If the Commissioner holds that the invention is not exceptionally meritorious, however, he may grant a patent for the ten-year term only. From such a decision there is no appeal. Should the Commissioner, on the other hand, refuse to grant a patent, his decision may be appealed to the Minister.

When the Commissioner finds that an application for a patent for an invention is dependent upon a previously patented invention, he can grant the patent as subservient to the first patent only if the applicant consents to have it so granted. If a patent of addition is sought, the owner of the principal patent has the privilege of acquiring the patent rights of the patent of addition at such a price as the Commissioner may decide.

Patents must be worked within two years of the date of issue (unless the time is extended for unusual circumstances), and the working must not be interrupted for a longer period than two years at a time, except when the interruption is due to circumstances beyond the control of the patentee or to accident, which facts must be certified by the Patent Office.

Fines of 50 to 500 pesos, prison terms of from one to six months, and forfeiture of articles which infringe are provided as punishment for patent infringement. If a second offence should be committed within five years, the penalty is doubled.

One who knowingly aids an infringement by selling, exhibiting, importing, or communicating may be subjected to the same penalties as the infringer.

AUSTRALIA

In Australia patents are granted for sixteen years from the date the application is filed. A patentee whose patent is expiring may obtain an "additional patent" for an addition or improvement to his original patent. In order that a valid patent may issue, the application must be made before the invention becomes known in Australia either by publications or by sale. If an invention has been publicly or privately tested or exhibited in Australia, the application must be made within one year of such test or exhibition. Patents may be extended for five years or, in exceptional cases, for ten years.

The application may be made by the inventor; his assigns, agents, nominees, or attorneys; the inventor or nominee jointly with the assignee of a part interest in the invention; the legal representative of a deceased inventor or of his assignee; any person to whom the invention has been communicated by the actual inventor, his legal representative, or assignee (if the actual inventor is not a resident of Australia); or any person or corporation entitled to apply under the International Convention or similar treaties, or the assignee of such a person or corporation.

The complete specification must be filed with the application. A period of three months is provided for receiving oppositions.

After the patent has been in existence four years any person may apply at any time to the High Court or the Supreme Court for an order declaring that the patented article or process is not being manufactured or used adequately in Australia. Should the court issue such an order the patent will not be deemed to be infringed by the manufacture or use in Australia or by the sale of the patented article. The court also has the power, as an alternative, to order the patentee to grant a compulsory license to someone else who applies for it.

In general, the law in Australia is the same as in Great Britain.

CANADA

A patent in Canada extends eighteen years from the date of issue. Only the inventor may apply, but the patent will be granted to an assignee, whether the assignee is an individual, a partnership or a corporation, provided the assignment is recorded before the patent issues.

The application must be filed in Canada within one year from the date of the filing of the earliest application in a foreign country. In the event that there have been no patent applications elsewhere, the Canadian application must be filed within two years of the date of the earliest printed publication, use or sale of the invention.

In filing an application the petition must be accompanied by a power of attorney, an oath, a signed specification in duplicate and drawings in triplicate. A third copy of the claims must be provided, and, if it is desired to have the patent issued in the name of an assignee, a duplicate copy of the assignment.

On patents now being granted no renewal fees are required. Formerly, however, the law required renewal fees to be paid at the end of the sixth year unless the final government fee had been paid at the time the application was filed. This law still is effective with regard to applications filed prior to June 4, 1921.

Canada requires that a patent be worked. This requirement, however, is tempered by the alternative of granting compulsory licenses. Unless the invention is worked in the dominion within three years in such a manner that any person desiring to use it may obtain it or cause it to be made for him at a reasonable price at some manufactory or establishment for making or constructing it in Canada, the patent monopoly ceases to the extent that you may be required to grant licenses permitting others to manufacture the patented articles in quantities which will supply the reasonable demands of the Canadian public. Citizens of the United States, therefore, should be careful not to try to supply the Canadian market wholly by importation after three years of the patent's issuance. Such an attempt may result in revocation of the patent on an application made by another party.

All patented articles which are sold in Canada must be marked with the word "patented" together with the year in which the patent was issued.

DENMARK

Patents run for fifteen years from their date of issue and are independent of the duration of prior foreign patents. They cannot be obtained if the invention has been published anywhere in a generally accessible print or if it has been used in Denmark. Patents of addition, granted during the term of the principal patent, expire at the same time. No patents are granted for the production of articles of food.

Foreigners must appoint a resident attorney. An examination is made as to novelty, and if it is satisfactory the application is published. Within two months thereafter any person may object to the issuance of the patent. After the two months expire and before two more months have elapsed, the Patent Commission will make a decision on the application. If the patent is refused the applicant may appeal within six weeks for reconsideration, and, if he is still unsuccessful, he may appeal to a special commission within the next four weeks.

Renewal fees are payable annually. The invention must be worked within three years after it is issued, unless the Patent Commission for cause extends the time. The commission may even exempt the patentee from working the invention if it is shown that the expense will be out of proportion with the demand in Denmark for the article.

Punishment by way of damages, confiscation of the articles, and fines are provided for infringement. The suit for infringement, however, must be brought within three years of the time the offence was committed and within one year of the time the patentee became aware of the infringement. The importation by other persons of articles made by a process patented in Denmark does not constitute infringement.

FRANCE

In France patents run for five, ten, or fifteen years, as the applicant elects. The initial cost for all terms, however, is the same, so that the fifteen-year term is always applied for. The term starts with the filing of the documents comprising the application. It can be extended only by an act of Parliament.

A patent may be issued for an invention already patented elsewhere, but the French patent cannot run beyond the prior foreign patent. Novelty is one of the requirements of patentability, and the invention will not be considered new if enough publicity to enable it to be worked has been given to it in any country before the French patent is applied for. The issuance of a United States patent has been held sufficient publication to defeat the issuance of a patent in France. This rule, however, as well as the rule about the French patent expiring with the prior foreign patent, does not apply when the French patent has been applied for under the International Convention. Priority under the Convention must be specifically claimed within sixty days after the French patent is applied for, preferably at the time of the French application.

No examination is made as to novelty or patentability or as to the right of the applicant to apply. The government is not empowered to refuse the application for any cause other than the failure to observe the formalities or because two or more inventions are covered in one patent application. If a patent is thus refused the applicant may renew his application within three months. Patents properly applied for are granted at the applicant's risk, there being no guaranty as to the accuracy of the description or as to the merit or novelty of the invention. It may not be amended after it has issued.

Annual fees are payable before the anniversary of the application; otherwise the patent lapses. This rule is rigidly adhered to. The patent will lapse also if the invention is not worked in France within two years of the date of the patent, or if it ceases to be worked for two consecutive years, unless good cause for failure to work is shown. Patents granted under the Convention, however, cannot be revoked for failure to work until three years after the date the patent issues. While it is essential that the working of the invention be real, not formal, manufacturing and offering for sale will constitute working, even though no sales are made, with the proviso, of course, that the owner of the patent has made the best efforts he could to commercialize his invention. It is suggested that the foreign patentee keep proof in affidavit form of the efforts he

made to work his invention. They will be valuable in possible lawsuits.

A patentee is forbidden to import the patented article into the country (the rule is made on behalf of French labor), except as is allowed under the Convention. Articles, however, may be brought in to be repaired and then sent out again, they may pass through on their way to other countries, they may be brought in as samples, or they may be articles necessarily used in carrying out a patented process.

Infringement is punishable by fine, enforced by the public prosecutor at public expense and at the instance of the patentee (not of a licensee). Imprisonment from one to six months is provided for a repetition of the offence within five years. Suits for damages and confiscation also are provided for. Criminal and civil actions may be taken only within three years of the time the offence was committed.

Patentees may be granted patents of addition for improvements or changes in their original inventions. These subsidiary patents expire with the principal one.

All articles made under a patent are required to be marked "Brevet sans Garantie du Gouvernement." This usually is reduced to "Brevet S. G. D. G." in practice.

GERMANY

German patents of invention run for fifteen years from the day following the date of application. Patents of addition terminate with the principal patent if the principal patent is allowed to lapse. If the principal patent is revoked, however, the patent of addition becomes a principal patent and may be kept in force until the time the original principal patent would have expired. To be patentable an invention must permit of industrial use. It must involve new action or result.

A special kind of patent, known as a "musterschutz," is granted for six years upon a "useful model," that is, a minor invention not calling for the high degree of inventive talent necessary to uphold a patent of invention.

An invention will not be considered new if it has been described in a public print anywhere or if it has been so pub-

licly employed in Germany as to enable persons skilled in the art to use it. Applications made under the Convention are saved the effects of previous publication between the date of the application in Germany and the date of the first application upon which reliance is placed for priority.

The first man to apply for a patent is entitled to it, but if it is shown that the invention was taken without consent from someone else's papers or application, the patent will be void.

For an applicant for a patent who does not live in Germany a resident agent must be appointed to receive notices for him so long as the patent is alive. If an application is filed under the Convention the priority must be claimed distinctly and an official certified copy of the original specification and drawings must be filed.

When an application for a patent is made it is examined for patentability and novelty. If fault is found, a "vorbeschied" or preliminary decision is sent to the applicant or his agent. He may amend or answer it within a specified time, usually two months. If no answer is filed or no extension is allowed, the application is considered withdrawn. If an answer is filed the examiner may issue additional vorbeschieds until he considers it ready for final action. The papers are then exposed for opposition. If the application is denied the applicant has one month within which to appeal to the Appeal Department, whose decision is final.

When the application is allowed the fact is published in the *Reichanzeiger*. For two months the invention enjoys provisional protection within which time opposition may be made. Within this time, also, the first of the annual taxes must be paid.

If a patent is being worked wholly or chiefly outside of Germany it may be revoked after three years. A compulsory license, with proper compensation and security, may be ordered when the public interest demand it. Under the provisions of a treaty with the United States the compulsory working agreement does not apply to American citizens so long as citizens of Germany are exempt from similar compulsory working in this country. In no case need "useful models" be worked.

Fine or imprisonment up to one year are provided for infringement knowingly committed. Damages or a fine in lieu of damages also may be demanded by the patentee. Infringement suits may be brought only within three years of the infringement.

GREAT BRITAIN

British patents run for sixteen years from the date of the application. In exceptional cases the term may be extended. In case a foreign application is filed before the British application, the patent will begin to run from the prior date. British patents do not expire with prior foreign patents. A patent of addition may be granted to expire with the primary patent.

Annual renewal fees begin before the end of the fourth year; the first of these is five pounds, the second is six pounds, the third seven pounds, and so on up to the end of the fifteenth year. Failure to pay fees will cause the patent to lapse, but for proper reasons an appeal may be made to the Comptroller for its restoration.

Upon the request of the patentee the Comptroller will indorse the words "licenses of right" upon the patent. Thereafter any person at any time will be entitled to a license under the patent upon such terms as, in default of an agreement, the Comptroller may determine. Such a license may be so framed as to prevent the importation of infringing articles. The indorsement, "licenses of right," may be removed upon application if there are no licensees. Using the "licenses of right" provision of the law will remove the necessity on the part of foreigners for working a patented invention.

Only the true and first inventor may apply for a patent. With foreign inventors, the first one to bring an invention into the country is considered to be the inventor. Therefore, a foreign applicant may be the actual inventor, his assignee, or any other person.

When an application for a patent has been accepted, the application may be accorded "provisional protection" up to the date of the sealing of the patent. This allows the applicant to use and publish the invention without prejudice to the

patent which is pending. Provisional protection is given as a matter of course whether the specification is provisional or complete and provides a period during which the inventor may perfect his invention and file his complete and fully developed specification.

If the complete specification is not filed within the statutory time from the date of application, the application is considered to be abandoned. The application becomes void if the complete specification is not accepted within fifteen months after the application is filed.

British patents being issued for inventions "new within the realm," prior publication or use in foreign countries does not invalidate them. When any foreign publication reaches Great Britain, however, it becomes subject to such rules as apply to British publications. Sufficient previous disclosure of an invention in a publication will invalidate a patent.

An address for service in the United Kingdom must be given by foreign applicants for British patents.

When a complete specification is accepted it is advertised in the *Illustrated Official Journal of the Patent Office*, and for two months may be opposed by anyone on certain grounds. There being no opposition, the patent may be sealed. In the event of opposition the Comptroller will receive evidence and render judgment accordingly. An appeal from his decision lies with the law officer.

In the event of infringement a patentee may sue for an injunction and may obtain damages equivalent to his loss. Damages are not recoverable, however, unless the articles are properly marked "patented." If a patentee has not been sufficiently remunerated he may petition the Supreme Court for an extension of his term.

HOLLAND

In the Netherlands inventions may be patented if they have not been published anywhere to the extent that they can be used by experts in the art and if they are capable of industrial application. Patents of addition are granted to the holders of the primary patent and expire when the primary patent does.

A patent runs fifteen years from the date of issue. Persons, not the inventors, who have used or prepared to use patented inventions, may be granted certificates of freedom to use if they apply within six months of the patent's publication.

In the case of foreign patents, a resident agent must be appointed in an application which is accompanied by a statement giving the countries and dates of filing in all the countries where patent applications have been filed. The applicant may be called upon to repeat the objections which have been raised in any of those countries to his application, and he must authorize the Patent Office to inquire direct on such matters from the proper authorities in those places.

Should an application be refused or should there be objectionable restrictions imposed, an appeal may be made within three months. After an application has been allowed it is open for four months for inspection and opposition.

Renewal fees are payable annually beginning with the second year. A fine is imposed for delay in paying these. The invention must be worked within five years of the date of issue, or satisfactory reasons given for non-working. A compulsory license may be ordered after three years have elapsed since the issue date. The mark "Nederlandsch Octrooi" followed by the patent number must be placed on all patented articles.

HUNGARY

Hungarian patents run for fifteen years from the date of application. For one year from the application the patentee may have patents of addition and the prior right to an improvement.

Foreigners must appoint a local agent. The method of application is modeled after that of Germany. Renewal fees are payable annually, beginning with the second year. The patent may not be abandoned without justification and must be worked within three years.

INDIA

Patents in India run for fourteen years from the date of application. The procedure is much the same as the procedure

in Great Britain. The application may be made by the inventor or his executor or administrator. When an application is filed an examination is made and, if acceptable, is accepted in about a year. To allow for opposition the application is kept open for three months after acceptance.

Annual renewal fees begin with the fifth year. The patent must be worked within four years under the possible penalty of revocation. A compulsory license may be ordered. If the patentee shows he has not been remunerated sufficiently, the patent may be extended for seven or fourteen years.

ITALY

Italian patents are granted for inventions not previously described anywhere in sufficient detail, other than publication in connection with securing a foreign patent. Patents for inventions already patented abroad are known as "patents of importation." Patents of addition expiring with the primary patent may be granted to the original patentee or his assigns, the patentee having priority for six months from the date of the issuance of the patent to apply for patents of addition.

A patent in Italy may run for as many years, not exceeding fifteen, as the patentee asks for in his application, the fees being determined by the length of the term. The original patent deed must be produced when applying for a patent of addition. Should an inventor desire a longer patent term than he asked for in his original application it may be granted up to the maximum period if asked for at any time before the shorter limit is reached. Annual taxes are imposed on all primary patents, none for patents of addition.

An Italian patent expires with a prior foreign patent, and if there are more than one such foreign patents it expires when the longest of them expires. If a patent has been granted for five years or less it must be worked within the first year and not interrupted for more than a year. If the patent is granted for five years working must be started within two years and not be interrupted for more than two years. Fraudulent infringement is punishable by fine and damages, confiscation may be had in a civil action.

JAPAN

Japanese patents running for fifteen years are issued for inventions not previously known or described in Japan. The owner of a primary patent may obtain a patent of addition. The inventor or an assignee may apply for a patent. When two or more persons apply, both of them being entitled to do so, the patent is issued to the first applicant.

Foreign patentees must appoint a resident agent, and such representation is necessary as long as the patent remains in force. If an application is rejected it may be amended or a reply may be made. If accepted it is published for opposition which may be made within two months. An appeal from a rejection may be filed within thirty days.

Annual renewal fees are required beginning with the fourth year. A compulsory license may be granted if the patent remains unworked for three consecutive years. If the patentee shows insufficient remuneration an extension may be granted for three to ten years. No damages may be recovered for infringement unless certain marks are placed on the articles or, when this is not practicable, upon the containers.

JUGOSLAVIA

Jugoslav patents run for fifteen years from the date of the publication of acceptance. Chemical products are not patentable, but processes for their production may be. Inventions relating to government monopolies, such as salt, explosives, matches, petroleum, may not be patented, Patents of addition may be granted and may remain in force even though the primary patent should be revoked.

Foreign applicants must appoint a resident agent. An applicant may ask three months' delay in publication, and if he does, at least three months' delay must be granted him. On a refusal of an application an appeal may be made within thirty days. The application is spread open for opposition for two months following publication.

Annually increasing renewal fees begin the second year. If within three years of allowance the patentee has not worked the patent or has failed to take all the steps necessary for work-

ing, the patent may be revoked, or if the patentee, working abroad, is merely supplying the articles into Jugoslavia, an order may be issued commanding him to work it in Jugoslavia under penalty of revocation. The time limit in such a case, however, cannot expire before the three years are up.

MEXICO

Mexican patents are granted for one or twenty years, and the latter may be prolonged by five years. The patent runs from the filing date. Chemical products are not patentable but their processes of production may be. Not only the inventor may apply for a patent, but also any person proving title to the invention derived from the inventor. Persons living abroad must appoint a resident agent.

None but a formal examination is made of an application, and the patent issues without any guarantee as to its novelty. Working the invention is not necessary, but a compulsory license may be granted for failure to work within three years of the filing date or if it is abandoned for three months.

NORWAY

Norwegian patents run for fifteen years from the date of application. Patents of addition expire with the primary patent, and, if the primary patent is revoked, they may be continued by paying the annual taxes which would have had to be paid on the primary patent.

Application may be made by the inventor or his assignee. Preference is given to the first applicant. Applicants residing abroad must appoint a resident agent for the entire patent term. Applications are examined for novelty and may be amended. On final approval the application is open for opposition for two months. Appeal from a rejection may be made within two months.

Increasing annual taxes are provided for. Compulsory licenses may be ordered if the invention is not worked within three years. After three years a junior patentee who cannot work his invention without infringing, may be granted a compulsory license. The court will fix the terms of such a license,

and referees, in the event the parties cannot agree, will fix the compensation to be paid the first patentee.

Fine and imprisonment not exceeding three months are provided for infringement which is committed knowingly. In a civil action the injured patentee may recover profits and damages. Articles which infringe may be confiscated or may be held by the authorities until the patent expires.

NEW ZEALAND

In New Zealand patents run for sixteen years; patents of addition are provided for. The patent law is substantially the same as that of Great Britain. The application may be made by an inventor or his assignee or nominee. A resident agent may apply in his own name if he is the inventor or assignee's nominee.

Renewal fees are payable before the end of the third year and before the end of the sixth year. If the invention is not being worked an order may be issued any time after the fourth year depriving the patentee of the right to recover for infringement. The number and year of the patent should be marked on articles; otherwise, the patentee may not, in the event that he cannot prove notice, recover damages for infringement.

POLAND

Polish patents run for fifteen years from the date of registration; no patents for chemical, pharmaceutical, or food products are granted, but processes for their production may be patented, and the protection will extend to the products. Persons already using the invention in Poland may continue to do so after the patent is issued. Patents of addition also are granted; they expire with the normal expiration of the primary patent, but continue if the primary patent is annulled.

Residents of other countries must appoint a resident agent. When the application is accepted, a certificate of protection is issued, and the application lies open for opposition for two months. Upon request the publication may be delayed six months. An appeal may be taken within three months of the denial of the application.

Increasing annual fees begin with the second year. Within three years after issue the patent must be worked, but, upon sufficient grounds being shown, an additional three years to begin working may be allowed. A competent authority must certify that the working has been performed to the degree required by the Ministry.

PORTUGAL

Portuguese patents run for fifteen years from the date of issue. New patents or patents of addition for improvements may be obtained by patent owners. Patents of importation also are provided for, allowing for the introduction of new processes not worked in Portugal for the preceding ten years. Chemical and medical compounds may not be patented.

Foreigners must apply through a resident agent with a power of attorney. When an application is made it is examined for novelty and sufficiency of description. If it passes this examination it is spread open for three months for opposition, but provisional protection is granted during this time. If an application is denied, an appeal to the Tribunal of Commerce may be made within three months.

Annual renewal fees are payable in advance. Within two years of signature the patent must be worked, and the work must not be interrupted for longer than two years without legal justification.

RUSSIA

Russian patents are granted for fifteen years from the date of issue. Processes or apparatus for the production of beverages, pharmaceuticals, foods, or chemicals are not patentable. A Russian patent will expire with a previously granted foreign patent. An application may be made by an inventor or his assignee, preference being given to the first applicant.

When the petition and other preliminary papers are filed a certificate of protection against infringement is issued. The application is exposed for opposition, and is then given to a committee of experts for examination. Upon rejection an appeal may be taken to another committee of experts.

Increasing renewal fees begin with the second year. The patent must be actually worked within five years, the working being certified by a local authority.

SPAIN

In Spain patents which are for "new inventions" are issued for twenty years, others for five years. An invention is considered new only if it is not already known and has been worked neither abroad nor in the Spanish domain. No patents for medicines may be obtained. Patents of addition may be obtained for the unexpired term of the primary patent.

An application, filed with the Ministry of Commerce, is referred to the Director of the Conservatory of Arts for examination. Patents date from the time of sealing.

Increasing renewal fees begin with the second year. Unless the patentee proves to the satisfaction of the Director that the patent has been worked in Spanish territory within three years from the sealing date, the patent will be annulled. The working must not be interrupted for more than one year and one day.

Infringement with knowledge is punishable by fine, by handing over the infringing articles to the patentee, and by civil damages.

SWEDEN

Swedish patents run for fifteen years from the date of the application. Applicants must be the true inventors or their legal representatives. Patents are not issued for foods or medicines, but are for methods of producing them.

Foreign applicants must appoint a Swedish resident representative for the duration of the patent. With a final rejection by the Patent Office an appeal lies to the King. When an application is found satisfactory, it is advertised for any protests which may be made within two months against the issuance.

Annual renewal fees begin before the end of the first year. The patent must be worked adequately in Sweden or the patentee's home country within three years of the date of

issue, or compulsory licenses may be granted. An infringer is liable to a fine and all damages. Implements used exclusively for unlawful manufacture may be destroyed. Persons who worked the invention or made extensive preparations to work it before the application for a patent was filed may continue to work it.

SWITZERLAND

Swiss patents run for fifteen years from the application. No patents are issued for foods and medicines or their processes of manufacture, nor for inventions for products obtained by processes other than mechanical for the improvement of textile fibres or for such processes to the extent that they touch upon the textile industry. Patents of addition, expiring with the primary patents, are provided for.

An application may be made by the true inventor or any person deriving legal title from him. The patent, if found in proper form, is granted at the risk of the applicant. There are no oppositions.

Increasing renewal fees start before the beginning of the second year. If the patentee unjustifiably fails to work his patent adequately in Switzerland within three years, any interested person may bring an action for revocation. Infringers are liable criminally and civilly, but action for infringement must be brought within three years of the last offence.

Patented articles may be marked with the Swiss cross and the number of the patent. An owner of a patent finding it necessary to use some subordinate patent issued to another may demand a license after three years from the date his own patent issued. If this is granted the other patentee may demand a like license.

UNION OF SOUTH AFRICA

South African patents run for fourteen years from the date of application. Ordinarily an invention is not patentable if a patent has been obtained previously in another country. If this other country, however, is the United States, Great

Britain, Canada, New Zealand, Australia, or India, the Governor General may issue a proclamation declaring that the foreign patent will not invalidate the patent in the South African Union if application is made within one year of the foreign application. Provision is made for patents of addition. Applications may be made by inventors or their assignees.

Specifications are examined for form but not for novelty, and the complete specification must be accepted within one year of the application. For two months the specification is advertised for opposition. Protection against infringements begins with acceptance of the complete specification.

Renewal fees are payable before the end of the third year, in the seventh year and in the tenth year. After two years from the date of issue of the patent, any person may present a petition for a compulsory license or for revocation of the patent if the patent has not been worked. The registrar may refer the question to a court. The laws relating to infringement are substantially the same as those in force in Great Britain.

CHAPTER XVI

ADVERTISING AND PUBLICITY

When automobiles were comparatively new and pedestrians had not yet become accustomed to gaging their speed, with the result that there was an alarming number of accidents, a well-known inventor saw the need for an invention that would give a sharp commanding warning of impending danger. The horn he devised was so effective that later, in the World War, it was used in the trenches to give notice of gas attacks, for it could be heard above the din of battle. Traffic regulations were so few at the time of the invention that the new horn was a real necessity.

Nevertheless, the public was apathetic. The inventor then bent all his energies to make the public acquainted with that horn. He threw all his resources into publicity. Printed advertisements and demonstrations were both used anywhere and everywhere. Within a few months it was impossible for any man not to know about that horn. The inventor's fortune was made.

Later, this inventor, speaking of making inventions successful, said:

> Eighty per cent of success in any business is due to advertising. As for inventors, their case may be stated by amending Edison's epigram, "A successful invention is two per cent inspiration and ninety-eight per cent perspiration," by adding that eighty per cent of the perspiration is commercialism, of which seventy-five per cent is advertising.

Nowhere is there more truth in the old saying. "It takes money to make money," than in the promotion of inventions, and for no item of the promotional effort can money be spent to greater advantage than for advertising. A new product on the market may succeed without advertising, but its success

would have been quicker and greater with it. Personal salesmanship and recommendations of satisfied customers are a mighty help in pushing a new device or product. Attracting people's attention, as they do, to the innovation, they are in themselves a kind of advertising.

Unaided, however, by the printed word, which carries the message of the product to thousands who otherwise would never hear of it, such efforts can never realize more than a fraction of their possibilities. The fate of many an enterprise has hung in the balance until advertising, thrown into the scales, has tipped them definitely toward success.

How much money to appropriate for advertising depends upon how much you have. Spend all you can afford, for the greater the number of persons who learn of your product through such means, the greater will be your success. But administer your advertising budget judiciously.

The first kind of advertising to suggest itself is that which appears in the daily and weekly newspapers. Here the first consideration is a proper selection of papers. For advertising purposes newspapers may be placed in two classes: those which have quantity circulation and those which have quality circulation. The *New York American* may be considered as representative of the first class, the *Brooklyn Daily Eagle* of the second.

The nature of the product you are advertising will determine the newspapers to use. If your invention is a cheap article to be bought by persons in modest or humble circumstances, you will want to use one kind of newspaper. If it is comparatively expensive, another kind of newspaper will produce better results. In other words, the paper whose readers have the highest social, financial, or educational standards are not necessarily the best for your purposes; it all depends upon the kind of people you hope your invention will appeal to.

Another factor to be considered in choosing a newspaper is the territory it serves. Some great metropolitan dailies have a comparatively large circulation in rural communities; they would be good mediums in which to tell the merits of agricultural devices. Others are confined almost entirely to the city

and its immediate vicinity; they would be almost useless for the same products. Some papers circulate in parts of the country where it might be hopeless for you to attempt to market your product; others in places where everybody might be a good prospect.

Make this your rule, then. Before deciding upon advertising in a particular paper find out what kind of people read it and where they live; see that they match up with the kind of people most likely to buy your article.

Do not waste your advertising. Before actually placing it consider this point. If you have a good story to tell and if you tell it in the right place and in the right way, you are going to create a demand for your product. What then? Are you ready to satisfy that demand? Before spending your first dollar for advertising you should arrange carefully and completely for distribution. Should you arouse a man's desire for what you offer, but provide no way of satisfying that desire immediately, you not only have wasted the money you spent for advertising, but you are likely to create in him a feeling of resentment or a suspicion which will more than likely react unfavorably later on.

Having determined what newspapers to advertise in, the next question to settle is how much space to use in each of them. Use plenty. When in doubt between which of two sizes to use, choose the larger. Seven-line or half-inch ads are meagre, and the results they produce will be meagre, too. Better results, out of all proportion to the increased cost, will result from display advertising. Do not be afraid to spend money.

Now the question is what to say in the advertisement. Above all, the statements should be truthful; more than this, they must *sound* truthful; that is, your device may accomplish some remarkable results, but if the telling of them sounds incredible, if the reader gets the impression that you are making extravagant and exaggerated claims, the result will be just as bad as if you actually were stretching the truth. It is better to understate your case than to overstate it; in fact, there is sometimes an emphasis in understatement. Be enthusiastic, yes, but let your story have the ring of truth in it.

Your invention has merits; it has qualities which will make the public want to buy it. Let these qualities be the talking points of your advertisement. Is it sold more cheaply than any other article of the same nature? Say so, if it is, for there is no better selling argument that you could use. Can it accomplish better results? Tell what they are and why and how. Does it look better? Will it last longer? Can it be put to more uses? Whatever its selling points are state them as convincingly and as fully and yet as briefly as possible.

There are two general ways in which the public, its desire aroused by your advertising, may obtain your article. One is by going to a store and asking for it. The other is by writing to the manufacturer. If the first method is used, you will have arranged in advance to have the dealer stocked up; if the latter, you will be prepared to send immediately upon receipt of the order. In either case your ad should state clearly where and how the reader may buy. Let your ad state, "At your local druggist," or "Ask your hardware dealer," or "Send check or money order to Adolph Sullivan, Room 666, 233 Broadway, New York, N. Y.," as the case might be.

Watch the results from your advertisements in the various papers you use. Of course, it will be impossible to trace the source of every sale, but by a careful check-up you can arrive at a pretty good idea of which mediums are paying you and which are not. So far as possible let the dealers, if the product is sold in stores, ask the customers what led them to ask for the article. Independently of the customer's statements, the dealers generally have a fairly reliable knowledge of what are and what are not good advertising mediums in their territories, and their advice may be relied upon in selecting which papers to use. It is to their advantage to have the ads pull as well as possible. In fact, the knowledge that you are about to run an advertising campaign is often the argument which induces the dealer to place the article upon his shelves; it is more potent than the merit of the article, for it means that a demand will be created for what he is about to sell.

Should the method of distribution be such that the consumer gets in touch with you direct, have your advertising

keyed, so that you may know from just what publication each order originated. The most usual way of keying an ad is to state a different address or room number or department for each publication. Thus an advertisement in the *Buffalo Times* might read, "Room 240, 469 First Street, Cleveland, Ohio," "469*A* First Street," or "Department *A*, 469 First Street;" while the ad in the *Louisville Courier* might read, "Room 241, 469 First Street," or "469*B* First Street." Keep a careful tally on the orders coming in bearing each address, and stop using the papers which do not show good results. With the papers that pay you can increase the number of times per week or month you run the ad, or you can use additional papers of the same character. If an ad is pulling well, do not change it in wording, appearance, or size.

On what days to run your advertisement in daily newspapers depends largely upon circumstances, for to some extent the papers are read for different reasons on different days. For example, Monday being a bargain day with many department stores, the Sunday newspapers carry extra-large quantities of department-store advertising. Automobile accessories are bought largely on Saturdays and Sundays, so that Fridays and Saturdays are good days for advertising them. Advertisments should be run not less than once a week. Three times a week is much better. Seven advertisements a week will give you better results than three, but not in proportion to the increased cost. A good plan would be to try advertising three times a week at the start.

The use of newspaper advertising is conditioned on the assumption that your invention is one that appeals to the entire public or a large portion of it, rather than to a limited, special class. The same principles hold true of general magazine advertising. Other forms of advertising may also be used when the consumers are general. These include street-car cards, billboards, and posters for display in store windows. With all of these make your reading matter short, interesting, and convincing. Illustrate it, if that will add to its attractiveness.

Another class of advertising you may find it necessary to use is the trade magazine. In this case your problem is somewhat different, for your use of trade magazines implies a different method of distribution. Your invention is a new, patent cuff link, we will say, such as might be sold through notion stores or jewelers. What you seek to do is sell to dealers rather than direct to the purchasing public. Select the trade magazines which the notion-store and jewelry-store owners read, and use an attractive ad. In writing it remember that your readers are not interested in the merits of the article, but in the profits they can make by selling it. The talking points will have to be very different from those you would use in a newspaper ad addressed to the general public. Instead of talking cheapness, utility, beauty, durability, and so on, you must stress quick sales, big demand, large margin of profit for the dealer, etc. As in every other kind of ad you must direct your message straight at the man you want to sell, using the particular arguments which will appeal most to him.

Still another kind of advertising is what is called "direct mail." In many ways it is especially desirable for the inventor embarking on the sea of trade with a new device. One advantage of direct-mail advertising is that it combines selling and advertising; you get results quickly if you are to get them at all. Another advantage lies in its simplicity; you need no cumbersome and complicated system of distribution. Another is its economy; you can start it with little capital and expand as your income increases or results justify expansion.

In reality, direct-mail advertising is a method of selling rather than of advertising, although advertising material must be used. It might be worked in the following manner: You have patented, we will assume, a game which combines features of education and entertainment. It appeals to men and women, old and young, and you believe it needs only to be described in order to be desired. You have a supply made. Then you obtain a list of names and send to your prospective purchasers a circular describing the invention. This circular offers to send the game by parcel post upon receipt of one

dollar. You receive orders accompanied by dollar bills or checks, and you mail the games.

It sounds simple. It may succeed in your case, and it may not. In any event it is worth trying, if your invention is suited to such a method of merchandising, for the cost will not be great. Assuming that your invention has merit, the circular will be a real test of your ability as a writer of advertising.

In estimating costs and profits in direct-mail advertising, figure that not more than 2 per cent of the persons who receive your circular will send you an order. The money received from this 2 per cent must more than pay your cost of manufacture, printing, and postage if your enterprise is to show a profit.

In all your advertising, of whatever kind, be consistent. The effect of all advertising should be cumulative, that is, seeing your product blazoned here, there, and everywhere, again and again, should so accustom the prospective buyer to knowing about what you have to sell that when he thinks of monkey wrenches or dyspepsia tablets or whatever it is you have on the market, he will think only of the kind you have been advertising and he will ask for it.

CHAPTER XVII

HOW TO RAISE CAPITAL

Adequate capital must be provided for the successful merchandising of any invention. The funds are needed for some or all of a variety of purposes: to develop the invention, to incorporate, to pay wages, for rent, for raw materials, for machinery, for advertising. Even with a comparatively simple proposition the list is a long one. The question is how to raise the necessary funds with a minimum of effort, a maximum of results, and the greatest possible freedom from unsatisfactory obligations.

Before seeking capital you will have mapped out how your article is to be made and sold. You will have figured out just what must be done with the invention before it can be considered ready for the market. As with a large number of inventions it may need to be developed, and this may be the case whether your patent is still pending or actually has been issued. Development of your invention is necessary to demonstrate whether or not the invention will work and just how well it is suited for what it is intended. Such development is necessary both for you, the inventor, and for the man who is to put up the funds.

A model should be made, and it should be tried out under service conditions. A long series of costly experiments may be necessary before the invention is in shape for exploitation. Such was the case with the telephone and the electric light in their early stages. Financing the development stage might well be done separately from financing the business later to be done. At the start seek only the funds necessary to prove the merit of your invention. This will make the subsequent financing of the manufacture and sale much easier.

In general there are two ways of raising money. One is to borrow and the other is to sell. For the inventor each has

its advantages and disadvantages. In borrowing, your first thought will be your bank. It cannot lend you money on your patent alone, however valuable in potential profits your patent might be. You must have tangible assets, for they afford some evidence that you will be able to pay back your loan. These assets may consist of securities, real estate, a going business, or some other form of property. You cannot hope to borrow money from your bank on an untried scheme; after your business is established the bank should be your best friend and your constant advisor. At the start your success at attempts to borrow from other sources depends upon the confidence you can inspire in your ability to repay.

The advantage in financing an invention with borrowed money is this: when you have paid back the loan you are in free and unhampered possession of your entire business; the whole management is yours and all the profits are yours. The disadvantage lies not alone in the difficulty of raising money on a loan, but in the burden a loan is likely to become. Constantly you must be striving to pay back that borrowed money with interest; the debt must be paid at a certain time, or you may not only lose everything you have, but be deeply in debt. A sizable loan is often too great a handicap for the business to stagger under.

Obviously, the thing that you can sell to raise money to develop and market your invention is a share of the patent rights or a share of the business you are about to do. The advantages of raising money by such sale are that you can raise it more easily than you could by obtaining a loan, you can raise a greater amount, and it is a more clean-cut and satisfying method generally. The disadvantage lies in the fact that you are parting with a portion of your property, and hence with a portion of your profits. Other things being equal you would make less in the long run in an industry financed by a loan than in an industry financed by the sale of a portion of the ownership.

Assuming that your enterprise is such that you desire to raise money by selling part of your rights, you may do this in

any one of several ways. You may assign an interest in the patent, you may form a partnership, or you may incorporate.

Beware of assigning an undivided interest, even though a definite size of the interest, such as a one-third or a one-fourth interest, is specified. Such an assignment does not mean that the proceeds are divided pro rata. By such an assignment you do not become the partner of the assignee; joint ownership or interest does not make you so. You and he are merely tenants in common. It is of little consequence how small is the interest conveyed by such an assignment; the assignee can proceed in much the same way as he could if he were the sole owner.

Suppose, for example, that you had made an assignment of an undivided one-fourth interest in your patent to an unscrupulous person in return for his advancing funds to develop your invention. Without consulting you or without giving you any kind of accounting, this assignee could lease the manufacturing or selling rights to some third party. He would be under no obligation to share his profits with you. There are numerous cases of inventors having lost their profits through dishonorable assignees.

Should you make an assignment of your interest in a patent, let your contract embody a covenant to the effect that your assignee shall not, without notice to you and without your approval, sell, assign, transfer, or otherwise encumber your title, make and sell, or grant licenses. The assignment may also contain a provision that the profits are to be divided in proportion to the interests of the parties. Thus the owners are placed in the relation of partners. When it is intended that the relationship of copartners shall exist there must be an express agreement to that effect.

A partnership is often the most advisable method of raising capital. This is true when the amount of money needed at the start is not great. Aside from the fact that it is easier to get along with one man than with several, there is the advantage that neither of you can force the other out at any time. For the other man to put his money and you to put your patent and your ability into the common pot is entirely

equitable. It is still more satisfactory when you both spend your time and energy to make the invention commercially successful.

Your partner should be selected with the utmost care. Preferably he should be a man you have known a long time; certainly he should be one in whom you have implicit confidence—confidence not only in his integrity, but in his practical business ability. You want the man himself to be an asset to your business, aside from the assets comprised by the money he put into the partnership. Be sure to obtain all the facts you can about his standing in the community, his previous record, his education, his technical knowledge, his habits, and his ability to handle matters of finance. Weigh his ability, his knowledge, and his experience with yours to see if his qualifications are complementary to yours, that is, his strong points are your weak ones; see if he is the kind of man with whom you can work well.

Let your partnership agreement take the form of a written contract. This should be drawn up by your own attorney and should provide for:

1. A precise definition of the duties of each partner.
2. The amount to be taken out of the business by each partner, whether in the form of salary, percentage of profits, or in any other way.
3. Arbitration or a joint appraisal in the event that there is a dispute between the partners over money matters.
4. The right of either party to buy or sell in the event that one partner offers a proposal to dissolve the partnership.
5. A clear statement of what happens to the patents in the event of the partnership being dissolved.

Often the best method of raising capital is by forming a corporation. It is generally the only practicable method if large sums of money are needed. Sometimes, however, there may be other considerations which make incorporation desirable even though partnership arrangements are possible. For example, a hardware man in a certain state patented a device which could be sold in his own store. He had ample capital to put it on the market himself. Nevertheless, he incor-

porated, selling the stock to other hardware dealers throughout the state. Each of the stockholders thus had an owner's interest in pushing the sale of the new article, a factor which had much to do with the tremendous success it enjoyed.

Generally, however, the necessity for a large amount of capital or for obtaining the capital from a large number of persons makes forming a corporation the most feasible method of raising the needed funds. A corporation is an organization created by the state and consists of several persons; it can transact business as an individual can; it may sue or be sued. There are a number of kinds of corporations, but the one the inventor is most likely to be interested in is the joint stock corporation. In this the ownership is divided into shares of stock. The money to run the business is raised by selling the shares.

Provided his invention is suitable, any inventor should be able to organize a stock corporation. The charter may be obtained in any of the states, although the legal requirements are easier in some than in others. New Jersey, Delaware, and West Virginia have generally been considered good states to incorporate in. With some states the incorporators need not be residents of the state, no annual statements are required, and meetings of directors may be held anywhere.

The first thing to do is to get about five persons to subscribe to stock and to act as incorporators. Then get your lawyer to draw up the articles of incorporation. He will advise you how to organize, securing the stock certificates, subscription blanks, etc. Have your stationery and prospectus printed and begin to solicit subscriptions. In doing this last be sure to have influential men head the list; their names will be a good selling argument for other prospective subscribers.

When the stock is selling well, get the incorporators to sign an application for a charter, and have your attorney file it with the proper state official. When enough stock has been subscribed call a meeting of the stockholders. At this meeting elect directors and transact any other business you may be ready for, deciding upon the location of your plant, the build-

ing, and equipment, and in general getting the company in shape.

In return for transferring his rights to the corporation the inventor receives a block of stock. How many shares go to the inventor depends upon circumstances, but usually the inventor should receive from one-fourth to one-half of the stock. The remainder of the shares are sold to provide working capital.

In interesting investors the prospectus is highly important. It is a printed statement telling the essential facts about the corporation and the amount of business it is likely to do. To a great extent the sale of the stock will depend upon how convincingly it sets forth the probable demand for the articles, the cost of plant and equipment, and the probable sales, expenses, and profits. If you can not get up the prospectus in good enough shape yourself, hire an expert to prepare it for you—some bankers and other persons make a specialty of prospectuses.

Finding financial backers for your enterprise does not differ greatly from finding a purchaser for your patent. Try your immediate circle of friends and acquaintances first; try men in your own community, for often there is a community pride which will be helpful to you. If the prospective investors realize that a factory is to be erected in their own community, that something is contemplated which will increase values generally in the vicinity, they will be more ready to subscribe.

If possible, it is better for you to do your own promoting. You know best what the enterprise needs and what are its possibilities. Let the amount of capital you seek to raise from other persons be as low as possible in order that you yourself may receive a maximum share of the profits when they begin to come in.

CHAPTER XVIII

TRADE-MARKS AND PATENTS

"What have trade-marks to do with patents?" the reader may exclaim at sight of the chapter heading above. The answer is simple. They apply to the same products, there are cases in which one may give protection where the other fails, cases in which one supplementing the other may add to the value of the invention, and even cases in which one may interfere with obtaining the other. Like patents, trade-marks are handled by the Patent Office.

Here is a true story, which should be better known than it is, illustrating the superior commercial value a trade-mark can add to an article over the value created by a patent.

On Feb. 1, 1889, a man named Charles M. Crandall, until that time not known beyond the borders of his home town of Waverly, N. Y., filed in the United States Patent Office a patent for a puzzle which was bound to make his name famous throughout the civilized world, as well as a fortune for himself and for the man to whom he assigned his patent rights—Moses Lyman, of the same town.

This puzzle was described in the patent application as follows:

> A game board or puzzle constructed to be held in the hand, having, in combination, a base provided with a continuous wall, a central pen, and a series of interior concentric fences, each of said fences being provided with an opening, which openings are out of line with each other substantially as shown and described.

On Sept. 10, 1889, the patent was duly issued. Put on the market, it took the country by storm. Scarcely a family anywhere was without one. The net profits from the manufacture and sale are said to have totaled more than a million dollars.

It was a simple little device, not very different from hundreds of puzzles which went before or hundreds which have appeared since, and it was inexpensive to make. A score of other manufacturers, seeing the success of Crandall and Lyman's device, put out similar devices, changed just enough to escape being infringements. For purposes of entertaining the ultimate consumer, they were just as good as the original puzzle.

Not one of these imitators made a success, however. And the reason is this:

Moses Lyman, on Feb. 28, 1889, filed an application to register as a trade-mark the words "Pigs in Clover." Registration was allowed two months later. The public flocked to toy, novelty, and department stores to get "Pigs in Clover." They would take nothing else just as good which might be known by another name. The trade-mark made the patent a success.

Before "Pigs in Clover," as a tale to point a moral, is put aside, by the way, attention should be called to a principle of trade-mark law which it illustrates. You will recall that Lyman applied for his trade-mark registration less than a month before he applied for his patent, and that the trademark registration was allowed five months before his patent was issued. Had he adopted his trade-mark after he received his patent, he would have had exclusive rights to it only for the life of the patent. Having registered the trade-mark before he had his patent, it was good for twenty years, when his registration could be renewed for another twenty years, then for another twenty, and so on to the end of time.

In other words, if you register your trade-mark for an unpatented article—this includes inventions for which a patent is pending—the trade-mark is good for the full trade-mark term of twenty years. If you register a trade-mark for an already patented article the trade-mark monopoly and the patent monopoly expire together.

For a trade-mark to exceed a patent in value is not uncommon. Whether it does or not depends upon many factors—the age of the patent, the breadth of its claims, the amount of advertising that has been devoted to making the product

known, the nature of the business, and a host of other things. Consider the value of such trade-marks as "Kodak," "Uneeda," "Ivory," "Gotham," "Vaseline," "Coca Cola," "Royal." In all of those cases any original patents there may have been have long since expired, but the name grows in value with the years. Put out the same products under any other names and their value would disappear.

In particular cases there sometimes is doubt as to whether patent or trade-mark protection should be sought, for sometimes both cannot be obtained. To illustrate:

For years manufacturers of automobile tires were in the habit of protecting the designs of their tire treads by taking out design patents. In 1925, however, the Fisk Rubber Company determined to register the design as a trade-mark. The advantage was obvious: a design patent runs for not more than fourteen years and cannot be renewed. At the end of the term the design becomes public property. A trade-mark, on the other hand, runs for twenty years and may be renewed again and again; the *prima facie* protection it gives is as great as that given by a design patent, and it can be made perpetual. The Patent Commissioner registered the mark, stating:

> Applicant points out the common practice among dealers and the public generally to recognize and distinguish tires of various makers by the form of the tread applied to the non-skid tire. It seems clear that the particular form given to such a tread does, in the mind of the public, indicate source or origin. When the particular shape is not made the subject of patent, so that it is dedicated to the public at the end of the patent period, I am unable to find any logical reason why the form of the tread itself should not be considered a trade-mark by this office, especially in view of the fact that it is commonly so considered in the trade and by the public.

The courts, however, were inclined to take a different view of such matters, and when later the Goodyear Tire and Rubber Company sought to register its tire-tread design as a trade-mark the Court of Appeals of the District of Columbia ruled against it.

Still later the Dunlop Tire and Rubber Company sought to register as a trade-mark a particular form of the meshed surface of a golf ball. The Patent Office refused it. The Commissioner ruled:

It is well known and not disputed here that the purpose of the meshed surface is mechanical to cooperate with the roughened surface of the club, and, possibly, to aid in the reflection of light so the ball is more readily seen from a distance when it lies on the ground after having been driven by a player.

After citing certain decisions, he concluded:

These decisions, and those recited in them, are persuasive that the meshed surface covering the entire ball and forming an integral part of the latter, and performing mechanical functions in the use of the ball cannot be regarded as a trade-mark for the goods. To hold otherwise would in effect be granting a perpetual patent for a golf ball having these features of construction.

Some time ago a newly issued patent came to my attention. The illustration showed a peculiarly shaped bridge extending from the heel across the arch to the edge of the portion of the sole covering the ball of the foot. There was something familiar about it. I dug back through some trade-mark records and found a picture embodying the identical construction. So far as I know, the trade-mark owner and the patentee have not had any litigation, nor has a question just like this, as far as I am informed, ever come before the courts, but if it should somebody would be denied protection. Probably it would be the patentee.

Although many industries are born of invention, their continued existence often is dependent upon public good will. This good will is built-up reputation, the link between the manufacturer and the public. Its symbol is the trade-mark by which the public identifies the product. The Court of Appeals of New York has defined a trade-mark as follows:

A trade-mark may be tersely defined to be any sign, mark, symbol, word, or words which indicate the origin or ownership of an article as distinguished from its quality, and which others have not the equal

right to employ for the same purpose. In its strictest sense, it is applicable only to a vendible article of merchandise to which it is affixed.

The one fundamental purpose of the trade-mark is to denote the origin of the particular article of merchandise to which it is affixed. The ownership of a trade-mark is a common-law property right, for the violation of which damages may be recovered in a court of law and the continued violation of which will be enjoined in a court of equity with compensation for past infringements. The ownership of a trade-mark is not created by statute, but statutes have been made for *registering* trade-marks. Unless your trade-mark is registered, you cannot claim ownership to it outside of the zone in which you are using it.

Since 1870 trade-marks used in foreign commerce, interstate commerce, or commerce with the Indian tribes have been registrable in the United States Patent Office. A certificate of registration remains in force for twenty years and may be renewed upon expiration for a like period. The original registration and renewal fees each are ten dollars.

The restriction that a registrable mark must be used in commerce is flexible, and subterfuges will not avail. This is illustrated by the experience of the Los Angeles Creamery Company, which sought to register the notation "Electric" as a trade-mark. In an effort to comply with the law, the company had a truck bearing the mark driven over the Mexican border and back again in going from one section of California to another, but it was not contended that any sales were made outside the state. The Commissioner, in refusing registration, said:

> The only condition under which the Patent Office obtains jurisdiction to register a mark is where the owner of the trade-mark seeking registration has used it in commerce with foreign nations or among the several states or with Indian tribes. Unless so used the applicant for registration has no standing under the statute. It is well settled that such activities as the applicant has shown do not establish trade-mark use in commerce with foreign nations or between states.

The right to use a trade-mark includes not only the particular articles with which it is used but includes also such articles as reasonably may be expected to lie within the development of the manufacturing. There is, however, an exception to this rule, illustrated by the dispute which arose in the Patent Office when the Victor Stove Company sought to register the word "Victor" as a trade-mark for furnaces, over the objection of the Hall-Neal Company, manufacturer of hot-air furnaces. Registration was refused. The commissioner's opinion was as follows:

> It appears from the evidence that for a long period of years the two companies sold their respective goods in substantially the same territory, each using the word "Victor" as its trade-mark, without a single instance of confusion in the public mind as to the authorship or ownership of the respective goods. While heating stoves and hot-air furnaces belong to the same general class of merchandise, and may in some cases have the same descriptive properties, yet the above evidence as to fact overcomes the theory advanced by the petitioner that its heating stoves are of the same descriptive properties as the registrant's hot-air furnaces.

If a manufacturer owns a trade-mark at common law, the natural question is, why should he register it in the Patent Office? There are several advantages, any one of which should be sufficient to induce him to register.

In the first place, registering a trade-mark affords *prima facie* evidence of use and ownership of the mark at the time the application for registration is filed. A trade-mark rightly belongs to the man who was the first to adopt and use it in commerce. There often, however, arises a dispute as to who was the first user. Each of two contestants may have been entirely in ignorance of the other's producing evidence tending to prove early business transactions involving the use of the trade-mark. Unless there is sufficient evidence to the contrary, the courts will decide that the man who registered his mark was using it as far back as the time he applied for registration.

Another valuable feature about registering a trade-mark is that it extends its use to interstate commerce and to foreign

trade. Without registration you may be using a trade-mark in New York State and New Jersey alone, we will say, and another man later may adopt and use the same trade-mark in California. Still later, you may decide to branch out and do business all over the country. You will be unable to stop that other man from using the trade-mark in California, even though he deliberately copied it from you. If your mark had been registered, however, your ownership would have extended to commerce all over the country and even to foreign trade.

When a trade-mark is registered in the United States Patent Office the owner is enabled to bring actions for infringement in the Federal courts, whether the owner and infringer live in the same state or not. For many reasons it often is desirable to seek relief in a Federal court rather than in a State court. For example, if you get a judgment against an infringer in a Federal court in one district, you may file it with the Federal court in any other district in the United States and it is effective. If your trade-mark is not registered in the Patent Office, and if both parties to the suit live in the same state, the action may be tried only in the state courts.

The Federal court may even grant you an injunction against infringement of your trade-mark in foreign countries. In a suit brought in a United States Court in Ohio over a product known as "Caustic Balsam" the Court said:

> No reason is perceived why the territory of Canada should be excluded from the injunction. No different situation with respect to plaintiff's and defendant's trade in that territory is perceived from what it is in the United States. Certainly, the fact that defendant had plaintiff's product shipped to defendant direct from France to Canada, instead of having it first shipped to the United States and then reshipped by defendant to Canada, is not a material difference. This court has jurisdiction of the parties and may, therefore, pass a decree binding upon them everywhere.

A valuable advantage of registering a trade-mark lies in the fact that the registrant has the privilege of excluding from the country goods for import which bear infringing marks. If your trade-mark is unregistered there is no way you can stop the importation. If it is registered, all you have to do is file

the registration with the Secretary of the Treasury and your trade-mark is protected from foreign invasion.

As the business you are doing under your trade-mark grows you may wish to extend it abroad. If your trade-mark is registered in the United States Patent Office, you may obtain registration of it in foreign countries on the same basis as citizens of those countries which grant reciprocal rights to citizens of the United States.

If the trade-mark is registered and you win a suit for infringement, you may secure a judgment for three times the actual damages you can prove.

You may mark your product with the legend, "Reg. U. S. Pat. Off." This is legal notice to the public that you have registered the mark and claim its ownership, and no further notice is necessary in the event that you start a suit for infringement. Without registration formal notice to the infringer would of course be necessary before taking any action, and damages could be collected only for those infringements occurring after the notification.

All of which would indicate to the owner of a patented or unpatented product being sold to the public under a trade-mark that it is highly desirable the trade-mark be registered in the Patent Office.

An applicant for registration of a trade-mark should be careful to avoid conflicting with a trade-mark which is already registered or already in use, even if it is not registered, provided, of course, it applies to the same class of merchandise. What constitutes the same class of goods, by the way, is a matter not always so clear as one might imagine. You might think, for example, that a hat is an article of clothing. That is what Rosenberg Brothers and Company, Rochester clothing manufactures, thought when they brought an infrigement suit against John F. Elliott, owner of a men's furnishing store in Shenandoah, Pa. Elliott had used the trade-mark "Fashion Park" on hats and caps. The courts declared there was no infringement, because hats and caps may be called furnishings, apparel, or haberdashery, but never clothing.

On the other hand, Lord & Taylor, a large New York department store, succeeded in restraining a manufacturer of underwear from using the trade-mark "Onyx," a trade-mark Lord and Taylor had registered for hosiery. The ground of the decision was that hosiery and underwear are sold in the same stores, frequently over the same counters, and the public naturally would think that the same manufacturer made both articles bearing the same trade-mark.

Trade-marks may conflict even if they are not identical. It is sufficient ground for a denial of registration if they are so similar in sound, wording, or appearance as to mislead possible purchasers.

Registration of a trade-mark will be refused if it consists of words describing a symbolic or pictorial device which already has been registered, or, on the other hand, the registration of the symbol will be refused if the wording has been registered first. For example, suppose you register the name "Bulldog" for a new type of wrench you are selling. Registration of the picture of a bulldog would be refused as a trade-mark for wrenches. The converse, of course, also would be true.

Even if the owners of the conflicting trade-marks agree that neither will be injured, the agreement will not change the attitude of the Patent Office. When the owner of a product sought to register the trade-mark "Nayassett," it was refused because it resembled too closely the registered trade-mark "Nassac." Later the application was renewed, this time accompanied by a formal consent of the owners of "Nassac." Registration again was refused, the Patent Commissioner taking the view that the public must be protected from confusion.

In one instance Congress has passed an act, not part of the trade-mark law, restricting the use of trade-marks. This has to do with the insignia of the Red Cross. Only those corporations which were old users of the mark when the act was approved (1905) may use it. New trade-marks containing Red Cross devices are forbidden, and the law is rigidly enforced.

Words which are descriptive of the products to which they apply are not registrable as trade-marks. The reason for this

is that a trade-mark is essentially an exclusive possession and when it ceases to be exclusive, it ceases to denote the particular origin of the goods. An ordinary word describing the goods cannot be appropriated as the exclusive property of one manufacturer. A mere misspelling of the word will not serve to make an objectionable word registrable. Thus the word "Kantleek" was refused registration for a hot-water bag. When the attorney for the applicant argued that the term was made up of two German words—"kant" and "leek"—which had meanings wholly different from the words in the English language which sounded like them, the Patent Office remained unmoved.

While a word that is descriptive, however, may not be registered, the same word may be registered if it is used in a fanciful sense. "Elastic" was refused registration as a trade-mark for drawers having an elastic seam, but the same word is considered as a valid trade-mark for sectional book cases.

Words which are *suggestive* of the quality of the goods rather than descriptive may be registered. Thus "Hydegrade," a coined word suggestive of high quality, has been registered. "Ideal," the trade-mark for a fountain pen, is considered fanciful and suggestive, rather than descriptive, and, therefore, is valid.

Geographical names may not be registered as trade-marks unless they are of such long standing that the owners have acquired common-law rights to their ownership. If used in a fanciful or arbitrary sense, however, geographical names may be registered. "Gibraltar" has been used for belting made in America, because it is suggestive of ruggedness and strength in the product.

It is not permissible to register the coat of arms of the United States as a trade-mark, and in one case simulation of the coat of the shield of the United States, with red and white stripes, was refused registration.

The mere name of a person may not be registered as a trade-mark unless it is written, printed, or stamped in such a way that the design dominates the name itself and is the most conspicuous part of the trade-mark. Henry Ford invoked this

particular feature of the law in a peculiar way. A cigar manufacturer sought to register as a trade-mark for cigars a picture of an automobile with the word "Henry" over it. Henry Ford and the Ford Motor Company protested, saying that in effect the mark was merely Henry Ford's name. The Patent Commissioner agreed with them, and inasmuch as personal names are not registrable as trade-marks, he refused to register the mark.

Portraits of living persons may be registered as trade-marks, but only if the person consents. Portraits of deceased persons, with the exception of former presidents of the United States, may be registered.

Trade-marks which are deceptive and misleading are invalid. Thus a false representation on a trade-mark to the effect that the article is patented, when as a matter of fact it is not, would vitiate the trade-mark. A mill owner sought to register the trade-mark "Filipino Drill" for army and navy uniforms. Registration was refused, the Patent Office holding that if the goods did not come from the Philippines or if they were not made of drill the mark was deceptive and that if they did come from the Philippines or were made of drill the mark was descriptive.

A trade-mark cannot be a color, the flag or coat of arms of a foreign nation, the shape of a package or a container, a design or picture which has been adopted by a fraternal society as its emblem, or it cannot be the article of merchandise itself.

With all of these restrictions it might seem that the choice of trade-marks is very limited indeed. As a matter of fact, the possibilities are almost infinite. There is practically no limit to the combinations of letters and words in the language, and the variety of valid signs and symbols is boundless.

Coined words like "Kodak," "Uneeda," "Cravenette," may be registered.

So may symbols such as the Rock of Gibraltar, a winged pyramid, the spear of Spearmint.

Also registrable are combinations of words and symbols such as a picture of a gargoyle and the word "Gargoyle" used by the Vacuum Oil Company.

"Portraits" are registerable. Mennen's portrait is on talcum-powder cans and Robert Burns's on cigar bands.

Words used in a fanciful sense may be registered, like "Cat's Paw" for rubber heels or "Lifebuoy" for soap.

Historical or mythological characters such as "Caesar" or "Venus" may be registered.

Initials or arbitrary numbers are registrable. This would include the "G.E." of the General Electric Company, "B.V.D." for a well-known unmentionable, or "61" for a floor varnish.

"Business names of persons, firms, or corporations when written, printed, impressed, or woven in a distinctive manner, in association with a portrait, or in autograph form, may be registered. "Gillette" inside a diamond and crossed by an arrow is a well-known example.

Many marks which are technically defective may be registered if they were in exclusive use by the applicant for a sufficiently long time. Thus Coward, the shoe manufacturer, was able to register his own personal name as a trade-mark because it had been used as a trade-mark since 1868.

Many marks, also, may be registered under an act passed in 1920, which provides for the registration of trade-marks which have been in bona-fide use for one year or more.

To get a trade-mark which will comply with the letter of the law and which may be registered is simple enough. To get a trade-mark which will have real business-getting value, however, is a little more difficult.

An ideal trade-mark generally is considered to have the following nine requisites:

1. It should be easy to speak.
2. It should be easy to remember.
3. It should be easy to spell.
4. It should be simple in design.
5. It should be attractive in sound and appearance.
6. It should suggest the desirable qualities of the merchandise.
7. It should be different from other trade-marks of the same class.

8. It should be possible to affix it to the goods with which it is used.

9. It should be registrable and protectable.

It may be that the nature of your patented article is such that a trade-mark does not apply to it, or it may be that your interest in your patent is such that trade-marks do not interest you. If, however, you are manufacturing and selling the patented article to the public, there is no better way to build up valuable and lasting good will quickly. Trade-marks can help the sale of any patented article. All the thought and effort devoted to securing one with real selling value will be repaid a thousandfold.

CHAPTER XIX

INFRINGEMENT

"A patent is only a license to sue."

There is more than a little truth in this oft-repeated cynical remark. Patent attorneys, however, have a more euphemistic way of saying it.

"A patent does not confer upon you the right to make, use, and sell your invention. This right was yours by common law. What the patent gives you is the right to prevent others from making, using, or selling your inventions." Without a patent you have no right to sue the man who pirates your idea.

The way you prevent others from appropriating your invention is by an appeal to the courts—in other words, by a suit for infringement. This right to sue is a valuable one. Such a suit not only prevents the loss of profits upon your invention, but, by placing the court's stamp of validity upon your patent, it often may enhance its value.

Inventors unskilled in patent matters are likely to think that a patent automatically becomes valid when it is issued by the Patent Office. Such is not the fact. The Patent Office assumes no responsibility in that regard and gives no assurance whatever of validity. True, while an application for a patent is being prosecuted, the Patent Office makes as thorough a search of patent records as is practicable, in order that it may determine whether or not there have been similar inventions made in the United States or in foreign countries. And if patents with claims which anticipate the claims in the application are found, the application—or rather those claims which are anticipated—will be denied. No guarantee, however, goes with an issued patent.

As has been pointed out before, a patent is a contract. It is for the courts to uphold or upset the validity of that contract if it should be called into question by an infringement suit.

Infringement of a patent for a process occurs when an unauthorized person uses substantially the proccess covered by the claims of a patent. It is of no consequence whether the infringer uses substantially the apparatus or the materials mentioned in the patent or whether he uses equivalents for them.

A patent for a machine or an article of manufacture is infringed when an unauthorized person makes, uses, or sells any specimen of the thing covered by a patent claim.

A patent for a composition of matter is infringed when the same or equivalent ingredients are used in the same or equivalent proportions to produce the same result.

A design patent is infringed by a design which, to general observers or to purchasers of articles which have such designs, has the same appearance as the design covered by the design patent.

"Strictly speaking, infringement of a patent is an erroneous phrase," Judge Inch in the Federal District Court in Brooklyn declared in dismissing an infringement suit brought by the Radio Corporation of America against the Twentieth Century Radio Corporation. "What is infringed is the claim which is the definition of invention, and it is the claim which is the cause of action."

It is the claims of a patent upon which suit is brought for infringement, a fact which makes it vital that the claims be valid. In a valid patent some of the claims may be valid and some invalid. Each claim constitutes a complete and independent invention. A claim broader than the invention it describes is void, and it cannot be whittled down in order to make it valid by a "construction" out of harmony with its language. On the other hand, an element not mentioned in a claim cannot be read into it, even though it appears in the specification.

Until the contrary is proven, the claims of your patent are presumed to be valid and upon it you may start suit against an infringer. It is necessary, however, that you prove that you have never made or sold any specimen of your invention without marking it "Patented," together with the issue

number of the patent; or else that you duly notify the infringer that what he is doing constitutes an infringement, and he continues to infringe after you have given him such notice.

The reason for this is that a man cannot be penalized for violating your rights unless he knows of your rights. This knowledge may be constructive, as when each of the articles embodying your patent are marked in compliance with the law, or it may be actual knowledge conveyed by your notification. In the latter case you can recover for acts of infringement committed only after the notice is given.

To establish *infringement* you must show the *nature* of what the infringer is doing; to establish how much *damages* you have suffered you must show the *extent* of his infringing acts. To complete your evidence of infringement you must show that what he did obviously and unquestionably was identical with what is covered by your patent claims.

To get an idea of just what constitutes infringement let us consider a few leading cases cited in "Walker on Patents," a work quoted constantly by the courts in making decisions. One is that of Tilghman *vs.* Proctor. The claim of the patent in suit was "the manufacturing of fatty acids and glycerine from fatty bodies by the action of water at a high temperature and pressure." The description of the process which was contained in the specification of the patent stated that the water should be mixed with the fatty bodies in the proportion of two or three parts of fat to one of water, and that the mixture should be heated to about 612° Fahrenheit and should be subjected to a pressure sufficient to prevent the heat from converting the water into steam.

The apparatus used by the infringer was wholly unlike that described by the patent and his process also differed in several respects. He mixed from four to seven per cent of lime with the water and the fat, heated the mixture to only about 310° Fahrenheit, and subjected it to a pressure correspondingly lower than what would have been necessary to convert the water into steam if he had used the higher degree of heat. Furthermore, he heated his mixture by means of superheated steam introduced into the vessel containing it, instead of

applying heat to the outside of the vessel, and he maintained the intimacy of the mixture by continuously pumping the water from the bottom to the top of the mingled mass, instead of continuously forcing the mixture through a coil of tubes.

In spite of all these differences, the Supreme Court declared that Proctor's process substantially included the process in Tilghman's patent claims and was, therefore, an infringement. The decision was not affected by the fact that the addition of the lime to the mixture was a useful addition to the process, the fact that Proctor's method of maintaining the intimacy of the mixture was superior, the probability that the heating by the introduction of superheated steam was more nearly perfect than the conducting of heat through the walls of the containing vessel, and the fact that the lower degree of heat and pressure used by the infringer was safer and more economical than that indicated in the patent.

Making an addition to a patented process does not avoid infringement, even though the addition may be an improvement. Infringement cannot be averted merely by reversing the steps in the process, accomplishing the same result in substantially the same way. Nor may an imitator escape infringement by using the same process to obtain a different result.

Whether making, using, or selling a particular thing infringes some patent claim is always a question of fact. Sometimes it can be decided by applying a rule of law and sometimes only by common sense. If your patent covers a machine or method of manufacture, the question of whether or not another machine or manufacture produces the same result is not the thing which determines infringement. The results may be identical, but the means for producing them may be quite different. Anybody may produce the same result without infringing the patent if he uses substantially different means. One machine may infringe another, however, even when it produces a different result. It is well settled that it is an infringement to use a machine covered by a patent claim, even though it is used for a purpose not mentioned in the patent.

A patent was issued to one Hayden for a machine for making brass kettles. It had two general divisions: first, an engine lathe with a mandrel to revolve the pulleys and the gearing and special devices for the special work to be done, and, second, a spinning or burnishing tool and tool carriage secured to the frame of the lathe, with special devices to make it work harmoniously with the lathe in producing the kettles which the machine's two divisions operated jointly to make. A sort of moving shaft, connected with some kind of motor, such as a steam engine or water wheel, operated the two divisions.

The infringer operated the first division of his machine by similar motor power, but to operate the second division he had a workman turn a crank. This was not such a change in the method of operation, the court held, as to escape being infringement.

One of the best-known and most frequently applied of all the rules applying to infringement is that the omission of one element or ingredient of a combination covered by a patent claim averts any charge of infringement based upon that claim. It makes no difference whether or not the omitted part was essential to the combination, or whether or not it was necessary to make the device operative. A combination is an entity. Omit one of the elements and the thing claimed disappears. The court will not permit evidence to show that any element of the claim was not necessary in the combination.

An imitator, however, will be guilty of infringement if he uses an equivalent for any ingredient in a combination covered by a patent claim. In one case, for example, celluloid was held to be an equivalent of metal. An equivalent may be defined as something which will perform the same function as another. Screws and wedges, for example, may be said to perform the same function and thus be equivalents.

Suppose that the man you charge with infringing your patent claims produces a patent covering his machine. What then? The courts will, of course, give due consideration to the reasoning of the Patent Office in presuming novelty in the alleged infringing device. In denying an appeal of the Standard Oil Company to set aside the lower court's decision sustaining

the validity of the Hopkins air-brush patent, the Circuit Court of Appeals said:

> The presumption that a patented combination is new and useful and embodies invention has added force where, as here, it appears that the patents relied upon as showing anticipation were considered by expert Patent Office officials. While their judgment is not absolutely binding on a court, it is entitled to great weight and is to be overcome only by clear proof that they were mistaken and that the combination lacks patentable novelty.

Your task is, of course, more difficult when the alleged infringer has a patent, but it is by no means impossible, as the numerous victories over infringers with patents can show. Patentable difference is not the same thing as non-infringement; in fact, when considering a patent application the Patent Office is not concerned with the scope of the claims of existing patents, but only with the disclosure in the specification and drawings.

With patents for composition of matter, infringement depends upon using the same or equivalent ingredients in substantially the same proportions. If one of the ingredients is omitted there is no infringement. An addition which results in no substantial change will not avert infringement. The Atlas Giant Powder Company had a patent which covered a compound of nitroglycerine and absorbent matter of which infusorial earth was stated to be the preferred variety. When mixed with three times its weight in nitroglycerine, the absorbent matter absorbed the whole and still remained in powder form. The compound was dynamite. An infringer's compound consisted of nitroglycerine and mica scales in nearly equal proportions; the mica scales did not absorb the nitroglycerine but held it in suspension. The compound known as mica powder, was more effective, safer, and cheaper than dynamite. In spite of the fact that there is a difference between a powder which absorbs a liquid and one which does not absorb, the court held that the dynamite patent was infringed by the mica powder.

When you sue a man for infringement your action is brought in a Federal district court. The suit may be an action at law in

which you seek money damages, it may be an action in equity in which you seek an injunction to restrain him from further infringement, or it may be for both forms of relief.

The alleged infringer who desires to contest your suit for infringement has twenty-eight possible defenses to make, as follows:

1. That the matter covered by the patent was not a proper subject for a patent.
2. That it is not an invention.
3. That it was not novel.
4. That it was not useful.
5. That you actually abandoned it.
6. That you constructively abandoned it, by not applying for a patent within the time allowed by law.
7. That the invention claimed in the patent is different from what you applied for.
8. That the invention was made by someone other than the patentee.
9. That someone was a joint inventor with you who appeared as the sole applicant for the patent.
10. That two of you claim to be the joint inventors, whereas only one was the actual inventor.
11. That your description and specification was made, for purposes of deception, to cover more or less than the entire truth necessary.
12. That the specification is not such that any person skilled in the art to which it applies can use it.
13. That your patent claims are indistinct.
14. That you delayed unreasonably to enter a necessary disclaimer.
15. That without every statutory foundation necessary you surrendered and reissued your original patent.
16. That the reissue patent's claims are broader than the original patent's, and that the reissue was not applied for until a long time after the grant of the original patent.
17. That the reissue patent covers a different invention from your original patent.
18. That what you claim in your patent is substantially the same as you claimed in a prior patent.
19. That your patent was repealed.
20. That the patent expired before the infringement took place.
21. That you failed to mark every one of your patented articles "Patented" or else failed to notify the alleged infringer.
22. That you have no title to the patent.
23. That the alleged infringer has a license permitting him to do what you accuse him of.

24. That he had a release discharging him from liability for the infringement you allege.

25. That he did not commit any infringement.

26. That you have no right to enforce any action against him.

27. That the statute of limitation bars your action.

28. That the Commissioner of Patents in granting you a patent exceeded his authority.

This list not only gives you some idea of the complexity of an infringement action, but demonstrates the necessity of having your own patent unassailable. In fact, in the vast majority of cases the battle ranges chiefly around the validity of the patent upon which suit is brought. The time to have guarded against such an attack was when preparing and prosecuting the patent application.

The damages you are entitled to recover in a suit for infringement are measured by the money injury you suffered because of the infringement. Sometimes this is an actual loss, sometimes it is the gain you would have made if it had not been for the infringement. The damages are measured by the loss you sustained, but how to measure this loss is not always an easy matter.

It cannot be determined by the amount of money the infringer made through his infringement, for it might be much larger or smaller than the loss you suffered. The real extent of your injury resulting from infringement is the difference between what your financial condition is after the infringement and what it would be if there had been no infringement. If you have granted licenses to some persons to work your invention, then the infringer has damaged you to the extent of the royalties he should have paid. If you have granted no licenses, and have been deriving your profit because no one but yourself worked your invention, then your injury consists of the profits you would have realized if the infringer had not violated your monopoly. Still another way to estimate the amount of damages arising from infringement is to establish what a reasonable royalty would have been.

Unless royalties were uniform, however, and actually paid by a sufficient number of other persons before the infringer committed the acts the patentee complains of, the infringer

may not protest against using royalties as a measure of damages, and the courts will sustain such a protest.

You yourself may object to royalties as a measure of damages if the royalty was established for a particular territory only or was altered or done away with entirely before the infringement was made. It may be that, hampered by lack of funds in the early days of your patent, you granted licenses for a royalty rate that was far from adequate. If, later, you change or abandon such a rate to insure a more just compensation, the old royalty figure will not be held against you.

When there are no royalties which can be used as a measure of damages, the extent of the infringer's injury to the patentee may be established by ascertaining what profits the patentee failed to realize because of the infringer's violation of your patent rights. Suppose that, as the holder of a patent, you would be the sole person supplying the demand for the articles manufactured under the patent. Your sales or your prices would be cut down by the infringer. The profits you would have made from sales if the infringer had not interfered are the measure of damages you are entitled to recover. This is assuming that all of the profits you would have made would grow out of the patented invention. When some of the profits may be attributed to other causes, an adjustment must be made accordingly.

If you are unable to show loss of royalties, lost sales, or competition that has been hurtful, then you may recover no more than nominal damages in an action for infringement. When you demand damages, you must have evidence that is definite; there must be a real injury before you can get from a jury a verdict for more than a nominal amount. Evidence must be concrete.

In some cases, however, you will be unable to prove the extent of the infringement; only the infringer can tell that. You may show that the damages are extensive, estimating them as accurately as you can, and the jury will fix the damages as nearly as possible, resolving every uncertain point against the infringer if he refuses to supply the necessary information.

In an action for infringement remote damages cannot be recovered. For example, infringement by a competitor may result in your losing business other than that in the article covered by the patent, your business may be so injured by the infringement that you are obliged to sell other articles at a sacrifice, you have to borrow money at extraordinary rates, or the infringement encouraged other persons to infringe. These injuries, while real, are considered remote and not proper grounds for recovery in an infringement suit.

Suppose you have never granted a license or manufactured under your patent; in other words, you have a mere "paper patent." How are you going to determine what your damages are? By estimating what a reasonable royalty would be. But are you to determine a reasonable royalty? That is difficult. The profits the infringer made may be taken into consideration in this connection. In deciding the suit, brought by the Consolidated Rubber Tire Company against the Diamond Rubber Company, the court said:

> In estimating loss of sales, it is, of course, necessary to show that the patentee would have made the sales. Not so with licenses. Every wheel made up with Diamond rubber was a wheel upon which the plaintiffs lost a license whether they would have manufactured it or not. In contributing to that eventual infringement which occurred when the rubber was so used, they contributed to a tort, the damages from which are to be estimated by a loss of the royalties which could have been got for that wheel. Whether the defendants could have secured better terms is beside the point. What they did was to deprive the plaintiffs of a corresponding amount of royalties on wheels, and the licenses for wheels are established.

Damages by way of punishment are not awarded by a jury, for the jury must base its verdict only on the actual injuries. The right to levy punitive damages rests with the judge. When he exercises such discretion, according to the circumstances of the case, he may enter judgment for any sum up to three times the amount of the verdict. A case in which the infringer's profits are larger than the actual damages in such a one as would call for a judgment for increased damages.

The same court which in an action of law has power to award money damages also has jurisdiction in equity actions, that is,

actions where the relief sought is not one for the recovery of money damages. In infringement suits the relief asked for is usually an injunction restraining future infringements. The equity court, in all cases where an injunction is proper, will take an account of the profits resulting from the infringement and will order the infringer to pay them to the patent owner.

The owner of the patent suing for infringement usually asks first for a preliminary injunction while the issue is being fought out. The purpose of this is to prevent further infringement while the court is deciding whether infringement really has taken place and, if so, what the profits and damages are. To obtain a preliminary injunction you must make out a *prima facie* case; that is, your evidence must be such that if it is all true it is legally sufficient to entitle you to an injunction.

In a proceeding for an injunction the same twenty-eight defenses may be used as are permissible in an action at law for damages. In addition there are two more defenses: first, that the court has not jurisdiction in equity, and, second, the defense of laches, or unreasonable delay. Jurisdiction in equity would be absent, for example, in a case where the patent expired before suit was started, and laches might be found where the patent owner failed to use due diligence in starting suit or failed to prosecute his action after it was started. Time alone is not the element in such a defense. There must be additional circumstances such as would cause an injustice to be done the infringer by an injunction. This might be the case if the owner of the patent remained inactive for a long period while he knew the infringer was investing a large amount of capital in the infringing operations.

When an action has been determined in favor of the patent owner against an infringer, an *interlocutory* decree will be entered. This adjudges that the patent suit is valid and that the defendant has infringed it. Usually, also, a *master in chancery* is directed to make an accounting of the infringer's profits and the patent owner's damages. Sometimes, at this point a permanent injunction is issued restraining the infringer from further infringements. A final decree, ordering payment of the amount of the damages, etc., is issued when the master's

report is made and all the incidental proceedings have been gone through. Appeals may be made to the Circuit Court of Appeals and in some cases where questions of law are involved, not questions of fact, to the Supreme Court of the United States.

Infringement suits are used often not only because of the direct benefits derived from triumphing over a weaker opponent, but also for their moral effect on other would-be infringers. Indeed they are used occasionally to bolster up a weak patent in the eyes of the public. Realizing that every court decision against an infringer tends to increase the belief in the validity of a patent, many manufacturers, especially in a structural patent, seek to build up validity on the precedent of acceptance by so-called infringers. So much has this been done that the procedure is pretty well established.

The first step is to have a patent issued. The next is to have it upheld in the lower courts. Usually this is a simple matter, for there has been great confusion between invention and design in static structures. The patentee next proceeds to start suit against a few infringers who are easily frightened or lack funds to put up a real fight. To avoid trouble and save money, they admit infringement and pay nominal damages.

After a few such cases the patent becomes well established, the record of admitted infringement grows to impressive proportions, and the likelihood becomes more and more remote that a rival manufacturer, accused of infringement, will have the courage to start a new fight against a patent which, although apparently weak, has such a long string of successes behind it. In other words, it is easier to surrender than it is to fight.

This practice naturally leads to frequent abuses. For example, a certain public commission, disregarding the advice of its engineers, decided to pay a large royalty to a patentee because the members of the commission had had their attention called to court decisions which led them to believe they would be personally responsible for any damages which might be awarded to the patentee if he should win an infringement suit. The patentee then had this successful claim to display to public bodies he desired to intimidate.

CHAPTER XX

INVENTING AS A PROFESSION

To a man who enjoys a large, regular income I put the question: "Does it pay to be a professional inventor?"

"Well," he replied, "it has paid me. I am my own boss, I have a better than average income, and I am doing the kind of work I like."

"But are you not an exception?"

"Probably, but you might say that every inventor is an exception. So is the man who is a specialist in any field. Just the same, however, I would say that most of us professional inventors—and there are more of us than most people think—work in about the same general way; that is, most of us probably follow the same fundamental principles. In other words, we have all discovered the same secret of success."

"And what might this secret be?"

"Be a specialist in some one particular field. Know all about it. Constantly have your eyes and ears open for some lack there may be in it—some need for improvement. One problem after another will be coming up. How can this article be produced more cheaply? How can it be made more attractive to purchasers? How can something new be turned out along this particular line? How can we get a substitute for this thing or that which will be even more satisfactory than the original article?

"As these problems present themselves, you set to work to solve them. You keep working away, testing this method or that, and discarding it, until finally you hit on the right solution. It is bound to come sooner or later—keeping persistently at it in a field where you know what you are doing is certain to bring results in invention as in any other kind of human endeavor.

"That doesn't seem like much of a secret of success, but I believe it is the fundamental principle underlying the work of every inventor who is successful."

"Specializing in one field, seeing new problems to be solved, and hard work, then, you would say, are the elements of successful inventing?"

"Yes. That is, they are the elements of what you might call the mechanical or technical success of an invention. To be commercially successful you need more. First, you need good patent protection, and, second, you need practical business ability in properly disposing of your patent or your patented articles."

"You are a good example of a successful inventor. Suppose you tell just how you got started at inventing, how you followed up one invention after another, and just how you make your profits."

"I have always been mechanically inclined. I imagine most inventors are. As a boy I worked about a machine shop, and when I grew up I worked for a manufacturing jeweler. Then another young fellow and I went in business for ourselves. We were beginning to get along pretty well when a tremendous slump hit us, and we had to dissolve. I took a job and became a traveling salesman for a concern making jewelry novelties.

"Although I didn't realize it at first, I was now in an ideal position to be an inventor. I was out and around in the trade where I could see what there was and what was needed. At the same time I had a mechanical training sufficient to enable me to work out most of the things I saw a need for.

"One of the first things to impress itself upon me in the stores I visited was the way ladies' vanity cases of glass or procelain would fall and break and the face powder spill out. I designed a new box of metal to hold the powder. That was an easy one. The harder problem was to produce a powder that would not spill.

"On the market at that time was a French product—powder in a hard cake. It had mixed with it gum acacia or some other adhesive substance to act as a binder. This powder was not at

all satisfactory. When a woman rubbed powder on her face, she didn't want to be obliged to rub a lot of glue with it. If only we could get a hard cake with nothing in it but talcum powder, we would have something far in advance of anything already in existence and something for which there would be a universal demand.

"Here was my problem. I set to work in my spare time. It took me four years before I got what I wanted—a hard cake of powder, the formula for which called for nothing but pure talc and distilled water. It is known as a 'compact.'

"That was the first of a long chain of inventions which have been my life work. You wouldn't want a cake of powder in the same kind of case as loose powder. I had to design a suitable case. Then, too, a hard cake would fall out of a box turned upside down or sideways just as readily as loose powder would spill. I had to design a plate on which to mold this cake of powder and which would serve also as a holder. Then there had to be a way of fastening this cake in the case. Then there had to be a way of ejecting the plate when all the powder had been rubbed off, so it could be refilled. A woman wouldn't want to buy a new vanity case every time she emptied it of powder—not at the rate powder is used nowadays. Then there had to be a single case that would hold two compacts, one for powder and one for rouge. Another invention. A special mirror had to be devised to be held between the two compacts. That was still another invention. There thus were several inventions, all related, before the whole thing was complete from a marketing standpoint."

"How many inventions have you patented?"

"Seventy-five or eighty."

"Have they all been in the same field?"

"Substantially all of them. I believe that an inventor should stick to the line he knows best. If some new line takes a man's fancy, however, there is no good reason I can see why he should keep out of it. But when a man goes in for inventing as a profession, he is likely to find himself inventing the sort of thing he specializes in in spite of himself.

"Here is an example of what I mean. I had an idea for a new kind of stethoscope for doctors. One day I was sitting in the office of a well-known physician in New York City talking about it. In reaching across his desk the doctor upset a can of talcum powder. It was one of those cans with sprinkler holes in the top and some of the powder spilled out.

"'Now why don't they make cans of talcum powder that won't spill?' demanded my friend. It was a sort of rhetorical question—one of those remarks to which no answer is expected. Nine hundred and ninety-nine times out of a thousand there would be no answer. But this time the question was hurled at an inventor, a man who specialized in things like powder cans and a man who had cultivated the faculty of recognizing problems to be solved when they came his way.

"'Do you mean that, doctor?' I asked.

"'Well, I hadn't thought about you taking me up on that remark,' he replied, 'but there really is a need for such an article. Why don't you try it? Here we have been talking about this new stethoscope of yours, but why not try the non-spill talcum-powder can? There would be far more of them sold and used than any doctor's instrument you could devise. Also, it's something that's right in your line.'

"I laid aside the stethoscope invention and went to work on a self-closing talcum-powder can. In due time I perfected the invention, obtained a patent, and sold it outright to a manufacturer for $25,000."

"Do you sell all of your patents?"

"No, I lease some of them. Take, for example, the little aluminum plate on which a face-powder compact is molded. The manufacturer pays me a royalty of one dollar on every thousand. That doesn't seem like very much, but when you remember that those things are made and sold by the millions you can appreciate its importance. Some of my patents I sell outright. You have to take the manufacturer's desires into consideration, you know. If a man wants to buy your patent outright and won't have it on any other terms it is better to let him have it that way than to have your invention lie idle. Usually, I have little trouble in disposing of my patents. The

manufacturers and I have pretty much the same viewpoint by this time of what the public wants, and, knowing that many of my inventions have been commercially successful, they are glad to consider anything I have to show them."

"That's all very well for you. You are established. But how about the inventor who is not recognized? What is he to do?"

"Get recognized. We are talking about professional inventors. Until a man is recognized as an inventor I should consider him an amateur. Every inventor has to justify his claims that his inventions are superior. Getting a fair hearing at the start is often the hardest part of breaking into the profession of inventing.

"In my case you will remember that making a face-powder compact of nothing but pure talc and distilled water was my primary invention. I knew it would be a success, but nobody else knew it. Some manufacturers I talked to were inclined to think it might go, but none of them were willing to risk a lot of money on it. One leading manufacturer of perfumes was willing to give me a trial. With him I made a contract for one year. He was to pay me twenty-five dollars a week and give me a little corner in his factory to work in. I was to make my powder compacts. He would have his corps of salesmen take the compacts with their other samples and try to sell them. If there was a real demand for my invention we could adjust our relations accordingly; if the public would not have it, then he had lost only a thousand dollars or so in salary he had paid me. When the year was up the manufacturer and I made vastly different arrangements I had established myself as an inventor and a specialist."

This inventor is quoted at length because his experience is typical. Not only does he stay close to the one particular line of industry with which he is most familiar, but, you will observe, he has one primary invention upon which most of his many other inventions are based. In his case it was the formula for the powder compact. The same sort of thing is true of many inventors. In some cases this fundamental invention is the invention of another man. In many—and among these are

some of the most successful—the primary invention has been conceived by the inventor himself.

Having started on a career of invention, inventors have two courses open to them. Like the inventor at the beginning of this chapter, they may devote their time and energy exclusively to inventing, leaving the merchandizing of the products of their invention to other hands. Or they may attend to the commercializing of the inventions themselves, working out as they go along new inventions for which they see a need as the demands of manufacture or the new uses to which their product can be put may develop.

Of the latter type of inventor is one of the author's acquaintances, who, through capitalizing his invention, has become the president of a million-dollar corporation. Let him tell how he got into the field of invention, although he had no mechanical training to start with. In the beginning all he had was the first requisite of an inventor—recognition of a definite need for a new article—plus, of course, brains and a determination to succeed.

"To become an inventor was the last thing I thought of," he said. "I was a business man, pure and simple, and I took up inventing solely as a business proposition. Some of my money was tied up in a company manufacturing paper pails for candy and ice cream. The investment wasn't paying. I determined to find out why. The one best way was to get first-hand information, so I went on the road for four months trying to sell pails. They just wouldn't sell. In calling on prospective customers I learned that there wasn't any particular demand for what I had, but there was a demand for a container for liquids and powders that was absolutely leakproof. Barrels were leaky and unsatisfactory; steel drums were heavy and expensive. There was a fortune waiting for the man who could fill the need.

"The chief problem seemed to be one of closing the container quickly and simply and, above all, of sealing it in a way that would be absolutely tight. I set to work. One after another I built twenty different kinds of drums; not one of them was practical. At last I succeeded in making a drum of

wood fiber with an expanding steel rim, a triple seal, and a unit closure. It was perfectly simple, and yet it was so new that I succeeded in getting forty-one of the broadest kind of patent claims allowed by the Patent Office.

"You could take that drum, fill it with baking powder, close it up and slam it as hard as you wanted to across the room, and not a grain of powder would sift out. It was just what was wanted. But making one drum that would answer the purpose wasn't enough. I had to make it in large quantities if I was to make any money out of it.

"This meant that there had to be machinery that would turn these drums out swiftly and automatically. There was no such machinery. It was up to me to invent it. The hardest job now seemed to be to devise a machine to make the strong, fiber shells. I wanted to make these shells perfect and yet not be obliged to trim the fiber. Box manufacturers told me it was impossible. I didn't believe it, so I built a machine, designing it as I built it. This machine was made with microscopic accuracy, and I had the greatest confidence in it. When I had it all finished I found it was utterly useless. The principle was wrong; what I needed was not microscopic accuracy, but something that would make microscopic accuracy unnecessary.

"I started again. For four months I worked day and night trying to find a way to keep that sheet of fiber under control as it passed around the roller. At last I had it—a system of controls and lifts. A man could stand beside the roller as it revolved, and when he saw the sheet of fiber beginning to work off to one side, he could turn a little screw, and the sheet would feed straight and true once more.

"What was the result? I had one machine which could make a container any size from three gallons up to forty-one gallons. A single operator could turn out five hundred of the largest size in a single day—more of the smaller ones. The output of twenty-five to fifty men working in an average cooperage plant under a huge investment could accomplish no more than my one machine.

"I was now ready to do business. I went out and got orders for my containers—trial orders. Repeat orders began

to come in, and they were bigger ones. At first firms would buy a hundred as an experiment. Later they began to place orders for ten thousand. Their competitors saw the new containers and wanted them too.

"Business began to boom. The thing began to attract the attention of financiers. Some of them were on boards of directors of companies which were buying the new container, and they saw big possibilities in it. These investors offered to help me finance a corporation which could take care of the growing business properly.

"This was to be no stock-jobbing affair, but a strictly manufacturing and selling organization. We formed a corporation with a million dollars in preferred stock and forty thousand shares of no-par value common stock. I was made president and chairman of the board of directors and retained a controlling interest.

"We worked out two ways to operate; first, manufacturing and selling the containers, and, second, leasing the machinery to make the containers. It was not long before nationally known concerns like Swift's, Armour's, and Squibb's began to use our containers. Factories for installing our machines were put up here and there, each of them paying royalties to our company.

"At this point, I suppose, tradition has it that an inventor can sit back and take things easy. I didn't find it so. Remember I had graduated from being an inventor into the head of a going business. The factories had to be supplied with wood fiber. I had to analyze lumber and methods of treating fiber for use with different kinds of products. I had to see that we got a plentiful supply of lumber.

"The business has grown more and more complex and at the same time more and more interesting and profitable. From nothing but an idea to the point where we have a million-dollar corporation extending over the country has taken six years. They have been marked by wild ideas and mistakes at times, they have been full of the hardest kind of work, but all the time there was a definite need to fill, a definite goal in mind, and they have been well worth while."

In recent years inventing has come to be looked upon more and more as a definite profession. Many of our great corporations like the General Electric Company, the American Telephone and Telegraph Company, and the General Motors Corporation employ a large staff of inventors who are specialists in their particular lines. These men are paid salaries commensurate with their recognized ability. In such cases a contract of employment is made whereby the patents obtained become the property of the employing company. In some cases provision is made for a royalty as well.

As an example of the manner in which an inventing department works, consider the B. F. Goodrich Company, where at the time this is written eighty men are employed to do nothing but invent. That such a department can be kept busy may be realized when it is understood that the company's line numbers approximately 25,000 separate items in rubber with sales totaling many millions of dollars every year.

John R. Gammeter, the process engineer who founded and developed this great department, has pointed out that although three big rooms and a dozen or so smaller offices make up the whole department, the entire factory may be called their experimental plant. The men work anywhere in the place, studying what they can improve and trying out their ideas. They try to keep about a year ahead of the immediate requirements of the company. When a new idea comes in Gammeter and his assistant decide which man—or possibly several men—are best qualified to take hold of it. Then, one at a time, he calls in these men and gives them the whole idea. Each inventor then goes immediately to Gammeter's chief assistant and repeats the problem as it has been outlined to him. Thus it is established that each man has a clear idea of just what the problem is.

Each task upon which the inventors work is given an individual number, and each inventor makes a daily report to a special clerk upon the progress he is making with it. In this way the chief of the inventions department knows accurately the status of any particular job and when it may be expected to be completed.

Explaining his methods in the magazine *System* some time ago, John Gammeter said:

On the first of every months we give each man a list of the work we have in mind for him for the next few weeks. Naturally, we give preference to a new machine which will save $100 a day over a machine which might possibly save $50 a day. Whatever is most important is tackled first, always.

How do we tell what a new invention may presumably save? We get those facts from our time studies. If a certain operation costs us fifteen cents for the labor on each product handled, and if we can speed up this work so that it can be done in half the time, we will virtually save seven and a half cents right there. Multiply this saving by the quantity of products made by the machine each year, and you get the total possible saving.

Half a dozen years ago, officials of the company came to our department and said, "See here, you inventors cost us a lot of money. You think that you are paying your own way, but how are we to know that you are actually an asset, and not a liability?"

Thereafter, we kept a record of what we made and what we saved. Here was so much money made in profits on a new product we devised. Here was a saving of so much a day in this department, and so much in another—each saving based on actual time studies of the old hand method and our new machine method. Each saving was checked by our auditor and by the head of the department interested. And the total for one year of our savings and earnings, after our own salaries, rent, and overhead had been deducted, was in excess of $250,000. Every year since then we have saved and made much more than that.

Thus far in this chapter we have discussed three main ways in which inventors work. One works independently, solving problems as he sees them and offering his solutions to manufacturers who would be interested. One has built up his own large corporation on his inventions and solves new problems as they arise in his business. One is employed as a professional inventor by a leading manufacturing concern.

Each of these men differs from the other two in many respects, but each has some traits common to most successful inventors. Each is a hard worker; each has specialized in some particular line; each has developed to a high degree what

is known as the "inventive faculty." Just what this faculty is has been the subject of frequent discussion. In defining it the Supreme Court has called it "that inventive faculty of the mind put forth in search for new results or new methods, creating what had not before existed, or bringing to light what lay hidden from vision."

A later justice in the Supreme Court, discussing invention, said:

> The truth is the word cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not. In a given case we may be able to say that there is present invention of a very high order. In another we can see that there is lacking that impalpable something which distinguishes invention from simple mechanical skill.

With even the United States Supreme Court at a loss for the perfect definition of the inventive faculty, suppose we content ourselves with calling it "creative imagination." The question is: Can it be acquired or cultivated to a sufficient degree to enable one to earn his living at it?

It can, in the same way that one can acquire by study and practice sufficient proficiency in music. It is sometimes said that inventors are born and not made. The same is said of poets and composers. Yet they can be trained. Every man has the inventive faculty to a greater or less degree. In only a few does this amount to genius. In a great many it has been developed by practice until it can produce the desired results. Not one of the many successful inventors with whom the author is acquainted considers himself a genius.

Thomas Edison has declared in discussing inventing as a profession:

> Genius is two per cent inspiration and ninety-eight per cent perspiration. I believe that any person, even of the most limited capacity, could become an inventor through study and sheer hard work. You can do most anything if you keep at it long enough. Of course, the man with a natural aptitude would get there first, but the plodder would eventually gain his point.

The constant brooding on the one thing is sure to develop new ideas concerning it, and these in turn suggest others and soon the complete idea stands before you. Above all things, a man must not give up, no matter how many obstacles stand in his way. It is this principle—this tenacity of purpose—that finally levels mountains. So once fairly on your way, don't stop because of some seemingly impassable object in front of you. What you want may be just beyond your nose, though you don't see it.

We are only at the beginning of knowledge. We are just beginning to emerge from the dog stage. All around us are wonderful things going on of which we have not the slightest knowledge. The next era will make the most wonderful advance in science and invention that the world has ever known or hoped for. So vast will that advance be that we can now have scarcely any conception of its scope, but already a great many of the inventions of the future are assured.

That the day of the professional inventor is here there can be no doubt. This is attested by the fact that manufacturers, great and small, in all lines find it necessary to have whole departments for development and research, where new products are devised to keep the wheels of their factories going and where new processes are worked out to cut manufacturing costs or to increase production. It is inventors who run these departments.

Manufacturers of every kind have their laboratories in which they spend millions for research, experiment, and development. The specialists—inventors—who solve their problems for them are highly prized specialists with salaries ranging from $3,000 to $50,000 a year. Upon these men they rely for the practical working out of ideas which keep their factories operating at a profit. Such professional inventors are always in demand.

To the inventor who is his own employer and who works upon his own initiative a word of warning may not be amiss at this time. Be practical. Don't waste your time on something for which there will be no demand.

To illustrate. When the typewriter was in its infancy a young clerk conceived the idea of a device which would count the words written on the machine. There already were meters which had been perfected, so he worked out an attachment for the typewriter's space bar. He took it to a typewriter manu-

facturer, who readily admitted that the device was ingenious, but pointed out to the inventor that the number of words written on a page of typewriting will average about the same as on every other page of about the same size—at least it will be close enough to satisfy the needs of any typewriter user. There was no demand for a device which would count the words —no need for it. The company, however, offered the inventor five hundred dollars. He refused the offer and threw his model away, disgusted at being offered so little for a task that had occupied him a year.

The invention over which he labored so long probably could have been turned out in two months by a professional typewriter inventor. Typewriters as we know them today have back of them ten thousand inventions and most of them have been developed in the experimental research laboratories of the manufacturing companies. They have spent millions on salaries and materials. Each year improvements are made, the vast majority of them by professional inventors, for the men who control the destinies of the typewriter companies realize that it is hard work, rather than accidental inspiration, which is needed in perfecting new and better devices. Before many of these inventions are started a need for them has made itself known; often this arises from complaints by customers.

Summed up, the qualifications of a successful professional inventor are about as follows:

1. He should recognize problems to be solved.
2. He should have intimate knowledge of the field in which he works.
3. He should labor painstakingly to work out a solution such as ordinary skilled workmen would not be expected to arrive at.
4. His invention should be something for which there is a demand.
5. He should secure adequate patent protection.
6. If he is a free agent, rather than an employee, he should exercise a fair amount of business ability in marketing his patent.

As to methods of working out the invention, Georges Claude, one of the most distinguished inventors of France, has said:

The problem is not what to invent but to choose among the multitude of things that which is most worth while. When I attack a problem I never seek to learn what others have done along the same line. That would incline my efforts along those lines and prevent my striking out along lines which might lead to the solution. And even though I should hit on the same general method of solution, it is inevitable that we should differ in important essentials.

As to the necessity for properly exploiting an invention after it is perfected and patented, witness the records in the Patent Office. Nearly a thousand inventions a week are patented, many of them assigned for manufacture at the time they are issued, many of them frivolous and unnecessary, but hundreds of them, alas, good, practical devices for which there is a demand or for which a demand could be created, destined never to realize their money-making possibilities because proper business-like efforts will not be made. If the inventions are to succeed, the inventors, or persons acting for them, must be practical.

CHAPTER XXI

TWENTY DON'TS FOR INVENTORS

1. *Don't try to invent in a highly technical field about which you know nothing.*

Other things being equal, the most successful inventions are made by men who understand most thoroughly the problems they are trying to solve, who know what has been accomplished already in that particular line, and who know why things are done in this particular manner instead of some other way. In the past many inventions were made by men outside the particular branch of industry into which they entered for purposes of making their one invention, but industry is now becoming so much more and more complex and specialized, that while you may introduce in an unfamiliar field an idea that is different—perhaps even patentably novel—the chances are against its being practical. If your knowledge is slight and largely theoretical, it is likely that hard-headed manufacturers will look upon your invention as visionary, and even though there may be the germ of a good idea in what you have evolved, they refuse to bother with it.

2. *Don't waste your time on "limitless power."*

This is another term for perpetual motion. Never a year passes without a number of would-be inventors trying to solve the problem of running a piece of apparatus without renewing the motive energy. Possibly it will be done some day—we have so many marvelous achievements that we hesitate to say anything is impossible—but the patent examiners as well as leading scientists are inclined to look upon the man who claims the invention of a perpetual-motion machine as either deluded or a faker. So skeptical is the Patent Office, in fact, and so many times has it been pestered with applicants with such devices, that it will not even consider such a claim unless a working model is provided.

Whether or not you think you can solve the problem of limitless power, it is hardly worth while trying. There are many more pressing needs of this workaday world where your prospects of success are far brighter.

3. *Don't overlook the possibilities for invention in your own particular line.*

There are few industries in which there is not room for a world of improvement. About some one industry you know more than you know about the others. That is the one in which lies your greatest opportunity for invention. Search it for some lack, some imperfection, for some reason why its products cost so much or take so long to manufacture, why their price is so high, or why they are not in greater demand among the purchasing public. Analyze this one industry which you know best, whether it be lumbering, dairying, radio, railroading, or what not, study it in its broad aspects and in its details. You will come to realize a definite problem to be solved, and as you study it in general, you will see the problem in its details. And when you do this, you have gone half the way to making your invention.

4. *Don't neglect the opportunities which lie in improvements.*

We often hear of "basic" patents. Generally, the term is loosely used. In the sense of being real pioneers, of patents for some wholly new principle underlying some industry, there probably have not been more than fifty basic patents issued in the entire history of the Patent Office. The vast majority of inventions are improvements, not only on the fundamentals but upon other improvements.

Every invention is subject to improvements and sometimes the improvement makes the former machine, process, or article far more valuable by enhancing quality, increasing production, or decreasing costs. Sometimes an improvement can be sold to the manufacturer using the former invention, sometimes to his competitor. Indeed, it is not uncommon for an improvement to be more valuable than the process or device it improves.

5. *Don't overlook the money-making possibilities in simple inventions.*

There is much to be said for simple little inventions whose advantages are readily apparent, things which might happen to occur to any one of us, things which the public will want in large quantities. Simple little inventions are easier to work out, they take less time, energy, and money, and they are easier to sell to manufacturers, for they will cost him less to make and less to sell to the public. Then, too, there are more manufacturers who are potential purchasers or lessees on a royalty basis than there would be in the case of larger and more complicated inventions. When the product reaches the public, the price may be low, but the large volume of business, including the customers who come back for more, often will more than make up for the greater price for more elaborate inventions.

When big inventions pay the inventor they pay well, but simple little inventions are generally the ones that pay more readily.

6. *Don't use the time and the equipment of your employer to make an invention on your account, without his consent.*

There are several objections to such a practice. In the first place, it is not honorable; in the second, it is not safe. Your employer, if he discovers what you are doing, may discharge you, a circumstance which would deprive you not only of your income but of the facilities for observation and study which you need, assuming that your invention is in the line of your work.

If your employer permits you to go ahead with your invention at his expense, a strong legal presumption is likely to arise that he is entitled to a shop right to use your invention as long as you remain in his employ. The right to a patent belongs to you alone, but you may have added embarrassment in disposing of the patent if it is encumbered by such a right as your employer might be deemed to have as a result of your actions.

It is far more satisfactory in every way to gain your knowledge and experience in the place where you are employed, and then to work out your invention in time that is your own.

7. *Don't strive for an invention in a dying field.*

The practical inventor swims with the tide rather than against it. An invention in a growing industry is far better than an invention in an industry which is expiring. In these days a new bolt for an automobile tire rim would be more likely to be successful than would a horseshoe nail, or a new electric light filament than a wick for a kerosene lamp.

There is more to financial success in inventing than the ingenuity the inventor displays or in the amount of business ability displayed in marketing the new idea. One of the greatest factors in determining whether an invention will succeed or not is the public demand which already exists for it or which may be created. Many devices are going out of use, and inventions that depend upon them will go out with them. It is a waste of effort to try to stay the march of progress; concentrate in some field that is growing in importance rather than in one which is dwindling.

8. *Don't rest with getting a patent.*

The older your patent is the shorter time it has yet to run. Other things being equal, a patent that has its full life of seventeen years before it in which to make money is worth far more than a patent with only ten years left. Manufacturers to whom you seek to sell it outright will recognize this fact.

Unless there is some reason for adopting a different course, start your efforts to make money out of your invention as soon as you have applied for your patent. It may take you until the patent issues to have the invention actually on the market, but even if you, or assignees or lessees of your patent, start selling before that time, you will be protected against infringers as soon as the patent issues. Time, you probably will find, will prove to be worth more than a few months' secrecy.

9. *Don't promote an invention in a competitive field unless it has some distinct, easily recognizable advantage over established competitors.*

The public has certain buying habits, and to jolt people out of them takes something unusual. Your invention must be more desirable in some way if it is to be a commercial success. It must be simpler, cheaper, handier, productive of a more

satisfactory result, last longer, look better, or have some other advantage over what the public is accustomed to use.

The mere fact that it is something different is not sufficient to insure its success unless tremendous sales effort and enormous advertising, usually beyond the resources of the inventor, are put behind it. Save your energy for a novelty with superior merit.

10. *Don't let your application lie idle in the Patent Office.*

Rule 77 of the Patent Office *Rules of Practice* reads:

> If an applicant neglect to prosecute his application for six months after the date when the last official notice of any action by the office was mailed to him, the application will be held to be abandoned.

Prosecution must include such proper action as the condition of the case may require. An amendment, whether it is admitted or not, which is not responsive to the last official action, will not operate to save the application from abandonment.

It is to the public interest that your patent issue as soon as possible so that it may expire sooner and so that your invention becomes public property at an earlier date. If for some reason you wish to keep your application alive in the Patent Office, you cannot accomplish such a result by inaction. You must either agree with the rulings of the examiner or disagree with them. You cannot keep silent.

11. *Don't fail to mark properly all patented articles.*

The law makes it the duty of all patentees and their assigns and legal representatives, and of all persons making or vending any patented articles for or under them to give sufficient notice to the public that the same is patented, either by fixing thereon the word "Patent," together with the number of the patent; or when, from the character of the article, this cannot be done, by fixing to it or to the package wherein one or more of them is enclosed, a label containing a like notice.

In any suit for infringement by the party failing so to mark, no damages may be recovered by the plaintiff, except on proof that the defendant was duly notified of the infringement and continued, after such warning, to make, use, or vend the article so patented.

12. *Don't waste your money on a fake promoter.*

Many inventors are poor business men. Realizing their own lack of experience in putting over business deals, they lend willing ears to the wiles of sharpers who send them plausible advertising literature.

When a promoter of whom you have never heard solicits you as a new patentee, and offers to sell your patent for you, without knowing a great deal about its merits, be on your guard. When he asks you for money in advance, whether it be for printing, advertising, postage, or what not, be doubly on your guard. There are responsible promoters who make real and substantial efforts to sell patents, but they have unimpeachable bank references, and they do not as a rule ask you to defray their expenses in advance.

Don't invest even a small amount without investigating.

13. *Don't put off, for more than a year after you file your application, your decision as to whether or not to take out foreign patents.*

To defer filing your applications for patents abroad until you see whether or not your invention is a success in this country is unwise. In some foreign countries a patent issues to the first man who applies for it, whether he is the first inventor or not. To protect the rights of inventors the International Convention for the Protection of Industrial Property provides that if you file your application in a foreign country within one year of the time you file your application in your home country—not from the time your patent issued—your claim to priority in the second country will date from the time you filed your application in the first country.

Unless you take advantage of this provision you are likely to find that you cannot obtain patent rights abroad.

14. *Don't lose your rights through neglect to file your application promptly.*

While you are working on an invention, someone else may have been working along the same lines, and may apply for a patent before you do. In the absence of evidence to the contrary the Patent Office will assume that the first to apply was the first to invent, and will issue the patent accordingly. Act

promptly if you want to get the protection for your invention which it deserves.

If you make public use of your invention two years before you apply for a patent, you are not entitled under the law to patent protection. If you let your invention lie idle an unreasonable time, you run the risk of the Patent Office or the courts ruling that you have abandoned your rights. There are many reasons for acting with due diligence in applying for your patent; none for delay.

15. *Don't sign a royalty agreement unless it contains a minimum-guarantee provision.*

Generally speaking, if an invention is a success, a license on a royalty basis is more profitable to an inventor than an outright sale. Occasionally, however, the manufacturer is not acting in good faith when he leases an invention and signs a contract whereby he gives you a specified sum for each article incorporating your patent which he makes and sells.

Many a patent is locked up in the safe of a big manufacturing company, never to be used. In acquiring it the manufacturer was preventing everybody else from using it in competition with him. It costs the manufacturer nothing if his contract calls simply for a specified sum to be paid on each article made. If there are no articles, there is no royalty.

See to it that there is inserted in your license contract a clause providing for a minimum-royalty guarantee or a minimum number to be made and sold. Have your contract so worded that it is to the interest of the manufacturer to further your interest.

16. *Don't fail to make a complete disclosure of your invention in confidence to two or more persons.*

Remember that your claim that you are the first inventor of your invention may be challenged, and if it is you must be able to prove how long ago you conceived your idea and worked it out. Evidence of witnesses will be valuable.

Select two persons you can trust, and describe your invention to them. Put in writing the facts you have told them, sign and date the statement. Then keep this statement in a safe place, so that if at any time a question should arise as to

whether you or someone else was the first inventor, you will have your evidence at hand to show the exact time when you began working on the invention.

17. *Don't hold back any facts from your patent attorney.*

Sometimes inventors hesitate to trust their patent attorneys, fearing that confidence may be betrayed or the invention stolen. If you have any fears of that kind about your attorney, get some other attorney you are sure of, but don't withhold any information which may be useful in getting you a patent as strong and as broad as your invention is entitled to.

Your patent attorney needs all the information he can get. Don't think you can get a good patent on a part of a process or an article, while concealing some one essential feature. Give your attorney all the facts he asks for, even if some of them do not seem important to you. He has a reason for asking all the questions he does, and the benefit will show up in the patent he gets for you. Keeping something from him may even result in a patent that is invalid.

18. *Don't tell the world about your invention before you apply for a patent.*

Perhaps you feel that someone is going to steal your idea. If your invention is a good one, you may be justified in this belief. It is true that some people do appropriate other people's ideas; for this very reason is our patent system valuable. Don't, therefore, make your plans public until you have taken some steps to protect yourself.

Remember, you have no legal right to prevent others from using your idea unless you actually have a patent. You should wait at least until you have asserted your claim to a patent before letting your secret become generally known or known to those who might use it for their own benefit. Some other man might even succeed in getting a patent on your idea, and, while you might be able, through evidence of your priority, to have it declared invalid, the task of recovering your rights would be long, hard, and costly.

19. *Don't throw away the first notes or sketches of your invention.*

Unless he neglects to assert his rights, the man who was the first to conceive an invention and reduce it to practice is the man who is entitled to the patent. If your invention is valuable and timely, there is always the possibility that others may be demanding a patent for the same thing. In such case you will need all the evidence you can get, and original documents make good evidence.

If you made a rough pencil sketch on the back of an old envelope, it would be human nature to make a better drawing some months later, for purposes of showing to your friends, and to throw the first crude draft in the wastebasket. Don't do it. Make your better sketch, but keep the old one and have on it the date you drew the picture. It may be valuable. The same thing holds true for models and written descriptions.

20. *Don't rely upon inspiration.*

Success in inventing generally is the result of long, hard work. An idea may come suddenly from nowhere without any apparent effort on your part, but it is more likely to come as the result of concentration, search, study, investigation, experiment, and testing out this method and that. And, remember, a mere idea is not invention. It usually is only the starting point for invention. You must put it in practical form; it must be operable.

Knowledge is a far better staff for an inventor to lean upon than is inspiration. There are men in the inventive field who have been called geniuses, but they, themselves, have attributed such talent as they possess to familiarity with the facts pertaining to the field in which they labored and to conscious effort to find a particular result.

CHAPTER XXII

THE QUESTIONS INVENTORS ASK

1. When my patent expires, can I have it extended for a further term?

No. Your contract with the government is that the patent runs for seventeen years and then becomes public property. An extension can be granted only by a special act of Congress, and Congress almost never grants an extension.

2. If my patent should issue with a mistake in it, can I have it reissued in correct form?

The reissue is allowed if the mistake is the result of inadvertence, accident, or mistake. With your request for a reissue you must surrender your original patent, and you must make a suitable oath in support of your application. The request for a reissue must be made within a reasonable time, preferably within two years. After two years have elapsed, it is extremely difficult to get a reissue.

3. What is the penalty for stamping "patented" on articles which are not patented?

When it is done with intention to deceive you are liable to a penalty of $100 and costs for each lot of articles so marked. This is true even though you may have a patent pending.

4. What protection do I have by marking "Patent Pending" or "Patent Applied For" on invented articles?

No protection whatever. Such a statement is merely a warning that you have applied for a patent and that if anyone wrongfully appropriates your invention he will be subject to a suit for infringement after your patent has been granted. It is only in the patent itself that you have any real protection or grounds to sue for infringement.

5. If I have a patent, can anybody make an article covered by my invention for his own use?

No. By the terms of your patent you have the sole right to prevent anyone from making, using, or selling your invention. No person without your authority can make it even for his own use.

6. Can I sue the government for infringement?

You can. If you prove your case the Court of Claims will award you damages. If you are an employee of the government, however, at the time you make your invention or at the time you sue you cannot collect for the use of your invention by the government.

7. If I should die would my patent expire with my death?

No. The title of your patent would pass to the executor of your will or the administrator of your estate.

8. Can my employer claim title to my patent?

Not without a special agreement to that effect.

9. Has my employer the right to use my invention?

Under some circumstances he has. If you invent a machine, for example, and use it in your employer's business or let him use it, it will be implied that your employer has a license to continue using your invention, or if you have produced your invention in your employer's time and with his materials he may have a "shop right" to use it.

10. Can a foreigner apply for a patent?

Yes. Anybody may apply—citizens, felons, foreigners, women, minors, executors or administrators of estates of deceased inventors, and guardians of insane inventors.

11. Can a valid patent be obtained for a method of keeping accounts or doing business?

It cannot. Inventions must consist of some apparatus for performing the task.

12. If I make an invention in a general way but get somebody else to work out the details and put the idea in practical

form, is the other man a part inventor and is he entitled to be a patentee with me?

No. Under such circumstances the invention is entirely yours. If the other man, however, should do more than merely use his mechanical skill to work out the idea you invented, and if what he does amounts to an invention of his own, he will, of course, be entitled to a patent on that part which he really invented. On the other hand, his work may be such as to really amount to a part of the invention which you had in mind, in which case he would be a joint inventor and entitled to be a joint patentee.

13. Can I patent a new shape for a tool or a machine?

Under some circumstances. If the tool or machine would perform new functions when made in the new shape, or if it would perform the old functions in a new and better way, then it would be an invention and you could patent it.

14. Another man and I are joint owners of a patent. May either of us without consulting the other grant a license to a third party to use the invention?

Yes.

15. If a man to whom I have granted a license to use my invention should break his contract with me, would the license be forfeited?

Only in the event that such forfeiture had been agreed upon under such circumstances.

16. Can a license to use a patented invention be transferred?

Not unless its terms so state.

17. Can a "shop right" be transferred?

No. It is a mere license and not transferable.

18. My patent application has been allowed officially, but more than six months have elapsed thereafter without my paying the final Government fee. Do I lose my rights?

Not altogether. Your application is considered to be forfeited. To renew it you must renew the application and pay the first government fee over again. The renewal of

elapsed application must be made within two years after the date on which the application for a patent has been allowed.

19. How can it be possible for me to get a patent which is entirely valid and yet which I cannot use without infringing somebody else's patent?

Your invention might be one which would depend upon another invention. For example, your invention might be a new method of operating typewriter keys. It would be useless without the many other patented inventions upon the typewriter with which it would be used.

20. Can a creditor who gets a judgment against me sell my patent to satisfy that judgment?

He cannot. A court of equity, however, may order your interest in the patent sold to satisfy a judgment and in such case would order you to assign the patent.

21. Do I need a model in applying for a patent?

No. The Patent Office will not accept a model unless it is absolutely necessary to an understanding of your invention. The only case in which a model is always required is that for inventions claiming perpetual motion.

22. I have the right to make, use, and sell a patented article for one state only. If I sell one of the patented articles to another man, can he use it outside of that state?

Yes. The sale carries with it the right to use the article throughout the whole United States.

23. My employer has heard that I am working on an invention, and he demands that I tell him about it. Must I?

No. An employer is not entitled to any knowledge of the independent invention of his employee.

24. When two inventors independently of each other make the same invention, but the later of the two applies for a patent promptly and before the first inventor applies or puts the invention to practical use, which one is entitled to the patent?

The second inventor. The first one is considered to have abandoned his rights.

25. Can I combine old principles or old devices and get a patent on the new combination?

Not if each of the elements in the new combination or aggregation remains individually unchanged in function and effect. They are patentable, however, when they are really a true, new combination, that is, "by the action of the elements on each other, or by their joint action on their common object, they perform additional functions and accomplish additional results."

26. If I have not marked my patented articles with a notice that they are patented, together with the number, or if I have not given equivalent notice to infringers, what damages can I recover for infringement?

Nominal damages only, unless the infringer has actual knowledge of the patent.

27. Can an inventor be barred from getting a patent because of another previous invention which he himself has patented?

Yes. In the case of a prior patent by the same inventor he has often better knowledge of the existing art than he would have if the invention had been patented by another.

28. After an inventor has assigned his patent can he deny the validity of the patent?

No.

29. Can a receiver in bankruptcy convey the legal title to a patent?

No. But a court may compel the bankrupt to assign his patent to the trustee or receiver.

30. If a man buys a patented machine, may he replace parts which were worn out, lost, or destroyed?

Yes. The purchase of a machine carries with it the right to repair the machine and replace worn parts until the essential parts have disappeared.

31. Can any one of the state governments issue a patent?

No. The right to issue patents is specifically delegated to the Federal government by Sec. 8, Art. 1, of the Constitu-

tion. The state legislatures may enact, however, and the state courts enforce regulations affecting the exercise of patent monopoly as a matter of protection to business or morals, provided such action does not interfere with vested rights of the patentee and the exercise of legitimate acts. The state may require that a license for the sale of manufactured articles be taken out even though the articles are produced under a patent.

32. Can I get a mechanical patent and a design patent on the same machine?

Yes. A mechanical patent is not of itself a bar to the grant of a patent for a design.

33. Can the government use my patent without my consent?

Yes. The government has authority to appropriate a license to use your invention if it is of vital public interest necessary to the existence of the government. For such appropriation you will be compensated according to the provisions of the statutes.

34. Can a man obtain a patent in the United States if he previously has applied for a patent in a foreign country?

Yes. But the application for the United States patent must be filed within one year from the date of the filing of the application abroad. When it is a design that is to be protected, the United States application should be filed within four months of the filing of the first foreign application.

35. May more than one person apply for a single patent?

Yes, provided they are in reality the joint inventors. If one of them, however, is the inventor and the other merely a partner or financial associate only the inventor may apply. The partner may secure rights in advance of the issuance of a patent by executing a deed of assignment drawn in such a way that the patent will issue in both names. A patent so issued has the same force and effect as if granted to the parties as joint inventors.

36. Does the government guarantee the validity of a patent?

No. The Patent Office is not concerned with questions of validity, but only with questions of patentability.

37. Are patents still granted for medicines?

Rarely. Often the best way to protect a medicinal compound is by adopting a distinctive trade-mark and keeping the ingredients secret.

38. Can I preserve secrecy in a patented process by stating some of the steps in my patent papers but holding back a few of the essential steps?

No. If such facts should be proven the courts would hold your patent invalid.

39. If there is a mistake in my patent application, can I change it before the patent issues?

To some extent; however, no new matter can be incorporated in an application after it has been filed in the Patent Office.

40. What will a patent cost?

For a patent for an article of manufacture, a process, or a compound, there is an initial government filing fee of $20, plus $1 for each claim over 20, payable with the application, and a final government fee of $20, plus $1 for each claim over 20, payable within six months following the notice of allowance. With a design patent there is one fee only, its size depending upon the term for which protection is asked, the fee for the three-and-a-half-year term being $10, for the seven-year term $15, and for the fourteen-year term $30, all payable with the filing of the application. In addition to the government fees are the service fees charged by the attorneys. These depend upon the scale fixed by the particular attorney and by the complexity of the invention.

41. Can an inventor obtain a patent without the aid of a patent attorney?

Legally, yes. The Patent Office, however, recommends that the inventor, unless he is familiar with such matters, employ a competent patent attorney on the ground that "the value of patents depends largely upon the successful preparation of the specification and claims."

42. If I have the main idea for my invention, can I apply for a patent now and add the necessary details later?

Yes. You may file your application for a patent now, provided your invention is workable and based upon well-known principles. You may work out the details later and present them to the Patent Office in a new application. New elements cannot be added to the original application.

43. If the examiner turns down my application for a patent, is there anything further that can be done?

Yes. An appeal may be taken first to the Board of Appeals of the Patent Office, then to the Court of Appeals of the District of Columbia or the Federal District Court, then to the Circuit Court of Appeals.

44. If another inventor has an application for a patent pending on the same invention as mine, how will I know about it so that I can protect my rights?

The Patent Office will declare what it calls an "interference," a proceeding to give the various inventors an opportunity to prove which of them was the first.

45. How can I know for a certainty that my invention is patentable?

A search of the Patent Office records may disclose that your invention is not patentable; but before the Patent Office makes its decision on your application nobody can know for a certainty whether or not your invention is patentable. Preliminary examinations do not provide complete information. They do not reveal foreign patents, pending applications which are in the confidential files of the Patent Office, nor published articles about inventions or discoveries which might act as a bar to your application.

46. If my invention is designed to hang pictures on a wall, will a separate patent be necessary to cover it as a holder for soap in a bathtub?

No. Your patent will cover all the uses to which your invention may be put.

47. Can I get a patent on a game?

No, but you might patent the game apparatus, copyright the rules, or get a design patent on the game board.

48. Will it pay me to apply for a patent?

The monetary success of your invention depends primarily not upon your patent but upon the merit of your invention itself. Without a patent, however, you have no legal right to a monopoly on your idea. It is through your patent that you profit from your invention.

49. How can I know for a certainty whether my invention will be worth anything or not?

Generally, there is no way of being certain about it. The best you can do is to get all the facts and circumstances likely to affect the success of your invention, analyze them, and reason as logically as you can what the likelihood of success or failure is. Many inventions that looked promising have not succeeded; many that were ridiculed have paid enormously.

50. May I claim two inventions in one patent application?

You may not. Where several distinct inventions, however, depend upon each other and mutually contribute to produce a single result, you may claim them in one application.

51. If another man makes an imitation of my invention, but leaves out one essential element, and then sells his product, instructing his customers how to supply that missing element themselves, will that be infringement?

Yes; that will be contributory infringement, for which the manufacturer, the seller, and the user all are liable.

52. What is a basic patent?

This is a term used more by the public than by the patent profession. It may be defined as a patent for an invention based on a new fundamental principle—an invention upon which all other inventions in that broad field are dependent.

53. Can the discovery of a scientific principle be patented?

No; only the application of the principle.

54. What do you mean when you speak of an "art?"

An art in the patent laws has a narrower meaning than it has in the dictionaries. It is used to include all of the processes in some particular field, such as "the art of hydraulics."

55. In an action for infringement what portion of the infringer's profits can I collect?

All of the direct and actual profits.

56. Can I collect interest on an infringer's profits?

Yes; from the date the amount of the profits were ascertained by the court or in the master's report. Interest is at the discretion of the court.

57. A patentee, who makes no articles himself under his invention, but receives royalties for licenses, has sued me, saying my invention infringes his patent, and, on the face of it, it looks as if he may be right. He asks for a preliminary injunction. It will hurt my business to stop making the article in question. Must I submit to an injunction?

No. In such a case bonds may be taken instead of a preliminary injunction being imposed.

58. Is a salesman who sells patented articles liable as an infringer?

Yes; any employed person who derives an independent and distinct benefit from infringing a patent, even though he is directed by his employer, is liable in an action for damages based on the infringement.

59. Is an infringer liable if he did not know of the patent at the time he infringed it?

Yes; provided your article was properly marked with the patent notice.

60. When a partnership holding a license to a patent is dissolved, what happens to the license?

If the business is continued the surviving partner is entitled to the license; if the business is discontinued the license lapses.

61. A man licensed my patent, made articles under it, and called them by an arbitrary name I had given them. Later he

forfeited the license. Could he use the name on competing articles?

No. A forfeiture of the license deprives him of the right to use that name for articles in competition with yours.

62. A patentee grants a license to use a patented invention, and later sells the patent. What happens to the license?

It is still in force.

63. Can I stop the importation of an article which infringes my patent, if it was made lawfully in a country in which I have not taken out a patent?

Yes, even though you conferred on the maker and seller in the foreign country the right to make and sell, and even if the importation is for purely personal use and not for sale.

64. If I sell my patent and it later is held invalid, who bears the loss, I or the assignee?

If both of you are equally innocent of knowledge that the patent was invalid, the loss will fall on the owner of the patent at the time the invalidity is learned. There is no warrant of validity implied in any assignment of a patent right.

65. Can a patent be taxed?

Patents are not taxable by state authority, because that would amount to interference with rights created by national authority. They could be taxed by the Federal government, although Congress has never enacted any statute providing for such taxation.

66. Can I recover for infringement from a man who makes and uses an improvement on a machine which I invented and patented?

Yes, even though his improvement is patentable, provided his invention includes yours. Patents take rank in the order of the dates upon which they were applied for.

67. If I get a patent for a product resulting from a particular process which I invent, can I prevent somebody else from making the same product by a different process?

No; your patent will be construed to cover only the process or the thing which produces the result.

68. If some of the claims of my patent are found to be invalid, does that invalidate the whole patent?

No, each claim stands on its own merits; some may be valid and some invalid.

CHAPTER XXIII

LEGAL FORMS FOR INVENTORS

The following forms are intended as suggestions only. While they have all been used many times and their soundness recognized, it is not intended that they take the place of forms drawn up by your own attorney to fit the special circumstances of your case. In the drafting of legal documents, as in all legal matters, you are advised to consult a competent attorney.

In transferring a patent, patentees should bear in mind that an assignment, grant, or conveyance of a patent will be void as against any subsequent purchaser or mortgagee for a valuable consideration without notice unless recorded within the Patent Office within three months from the date thereof or prior to such purchase or mortgage.

In every case in which it is desired that the patent issue to an assignee, the assignment must be recorded in the Patent Office at a date not later than the day on which the final fee is paid. In the case of an application for a design patent the assignment must be recorded before the case is allowed.

ASSIGNMENT OF INVENTION BEFORE PATENT IS APPLIED FOR

Whereas I, ..., of ....., county of ....., and State of ....., have invented a certain improvement in ....., for which I am about to make application for letters patent of the United States; and whereas ....., of ....., county of ....., and State of ....., is desirous of acquiring an interest therein:

Now, therefore, in consideration of ..... dollars, the receipt of which is hereby acknowledged, I, ..., by these presents do sell, assign, and transfer unto ..... the full and exclusive right to the said invention, as described in the specification executed by me on the .... day of ....., 19.., preparatory to obtaining letters patent of the United States therefor; and I hereby request the Commissioner of Patents to issue said letters patent to ..... as the assignee, for his interest, for the sole use and behoof of said ..... and his legal representatives.

Executed ....day of ....., 19.., at .....

(Inventor's full signature)..... [SEAL.]

In presence of—

.....

.....

ASSIGNMENT OF INVENTION WHILE PATENT IS PENDING

Whereas I, ..., of ....., in the county of ....., State of ....., have invented an improvement in ..... and have filed an application for letters patent of the United States, bearing serial number ....., and dated the .... day of ....., ..., based thereon; and whereas ...., of ....., in the county of ....., State of ....., is desirous of acquiring the entire right, title, and interest in and to the said invention in and throughout the United States, its territories and all foreign countries thereto, and in and to the said application for letters patent, and in and to any and all letters patent of the United States and countries foreign thereto which have been or may be granted on said invention or any part thereof;

Now, therefore, in consideration of the sum of ..... dollars, the receipt of which is hereby acknowledged, I, ..., by these presents do sell, assign, and transfer unto the said..... ..... the entire right, title, and interest in and throughout the United States, its territories, and all countries foreign thereto in and to said invention, said application for letters patent and any and all letters patent and extensions thereof, of the United States and countries foreign thereto which have been or may be granted on said invention or any part thereof or on said application or any divisional, continuing, renewal, reissue, or other application based in whole or in part thereon or based upon said invention;

To be held and enjoyed by the said .... and his legal representatives to the full ends of the terms for which said letters patent or any of them have been granted as fully and entirely as the same would have been held and enjoyed by me had no sale and assignment of said interest been made; and I do hereby authorize and request the Commissioner of Patents to issue any and all letters patent which may be granted upon the said applications above referred to, or any of them, or upon said invention or any part thereof, to .... aforesaid; and I hereby agree for my heirs, executors, and administrators to execute without further consideration any further legal documents and any further assignments and any release, renewal, or other application for letters patent that may be deemed necessary by the assignee herein named, fully to secure to the said assignee its interest as aforesaid in and to said invention or any part thereof, and in and to said several letters patent or any of them.

And I do hereby covenant for myself and my legal representatives and agree with .... and his legal representatives that I have granted no license to make or sell the said invention, that prior to the execution of this deed my right, title, and interest in the said

invention had not been encumbered, that I then had good right and title to the sale and assignment of the same, and that I have not executed and will not execute any instrument in conflict herewith.

(Inventor's full signature) .... [SEAL]

State of .....
County of ..... } *ss:*

Before me personally appeared said .... and acknowledged the foregoing instrument to be his free act and deed this ..... day of ....., 19...

[SEAL] ....,
Notary Public.

ASSIGNMENT OF PATENT AFTER ISSUE

Whereas I, ..., of ....., county of ....., State of ....., did obtain letters patent of the United States for an improvement in ....., numbered ....., and dated the ..... day of ....., 19..; and whereas I am now the sole owner of said patent; and whereas ....., of ....., county of ....., and State of ....., is desirous of acquiring the entire interest in the same:

Now, therefore, in consideration of the sum of ..... dollars, the receipt of which is hereby acknowledged, I, ..., by these presents do sell, assign, and transfer unto the said ...., the whole right, title, and interest in and to the said letters patent therefor aforesaid; the same to be held and enjoyed by the said ...., for his own use and behoof, and for his legal representatives, to the full end of the term for which said letters patent are granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

(Inventor's full signature) .... [L. S.]

State of .....
County of ..... } *ss:*

Before me personally appeared said ..... and acknowledged the foregoing instrument to be his free act and deed this ..... day of ....., 19...

[SEAL.] ....,
Notary Public.

ASSIGNMENT OF PART INTEREST IN PATENT

Whereas I, ..., of ....., county of ....., State of ....., did obtain letters patent of the United States for an improvement in ....., numbered ....., and dated the ..... day of ....., ...; and whereas ....., of ....., county of ....., State of ....., is desirous of acquiring an interest in the same:

Now, therefore, in consideration of the sum of ..... dollars, the receipt of which is hereby acknowledged, I, ..., by these presents do sell, assign, and transfer unto the said ....., the undivided one-half part of the whole right, title, and interest in and to the said invention and in and to the letters patent therefor aforesaid; the said undivided one-half part to be held by ...., for his own use and behoof, and his legal representatives, to the full end of the term for which said letters patent are granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

(Inventor's full signature) .... [L. S.]

State of .....
County of ..... } *ss:*

Before me personally appeared said ..... and acknowledged the foregoing instrument to be his free act and deed this ..... day of ....., 19...

[SEAL.] ....., *Notary Public.*

GRANT OF TERRITORIAL INTEREST IN INVENTION

Whereas I, ..., of ....., county of ....., State of ....., did obtain letters patent of the United States for an improvement in ....., which letters patent are numbered ....., and bear date the ..... day of ....., in the year 19..; and whereas I am now the sole owner of the said patent and of all rights under the same in the below-recited territory; and whereas ...., of ....., county of ....., State of ....., is desirous of acquiring an interest in the same:

Now, therefore, for and in consideration of the sum of ..... dollars to me in hand paid, the receipt of which is hereby acknowledged, I, ..., by these presents do sell, assign, and transfer unto the said ..... all the right, title, and interest in and to the said invention, as secured to me by said letters patent, for, to, and in the State of ....., and for, to, or in no other place or places; the same to be held by ..... within and throughout the above-specified territory, but not elsewhere, for his own use and behoof, and of his legal representatives, to the full end of the term for which said letters patent are granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

Executed ..... day of ....., 19..

..... [L. S.]

In presence of—

.....

.....

LICENSE FOR SHOP RIGHT

In consideration of the sum of ..... dollars, to be paid by the firm of ....., of ....., in the county of ....., State of ....., I do hereby license and empower the said ..... to manufacture in said ..... (or other place agreed upon) the improvement in ....., for which letters patent of the United States No. ..... were granted to me the ..... day of ....., in the year 19.., and to sell the machines so manufactured throughout the United States to the full end of the term for which said letters patent are granted.

Signed at ....., in the county of ....., and State of ....., this ..... day of ....., 19...

....

In presence of—

....

....

NON-EXCLUSIVE LICENSE AGREEMENT WITH ROYALTY

This agreement, made this ..... day of ....., 19.., between ...., of ....., in the county of ....., and State of ....., party of the first part, and ...., of ....., in the county of ....., and State of ....., party of the second part, witnesseth, that whereas letters patent of the United States No. ....., for improvement in ....., were granted to the party of the first part on the ..... day of ....., 19..; and whereas the party of the second part is desirous of manufacturing ..... containing said patented improvements: Now, therefore, the parties have agreed as follows:

1. The party of the first part hereby licenses and empowers the part of the second part to manufacture, subject to the conditions hereinafter named, at their factory in ....., and in no other place or places, to the end of the term for which said letters patent were granted, ... containing the patented improvements, and to sell the same within the United States.

II. The party of the second part agrees to make full and true returns to the party of the first part, under oath, upon the first days of ..... and ..... in each year, of all ..... containing the patented improvements manufactured by them.

III. The party of the second part agrees to pay to the party of the first part..... dollars as a license fee upon every.....manufactured by said party of the second part containing the patented improvements; provided, that if the said fee be paid upon the days provided herein for semiannual returns, or within ..... days thereafter, a discount of .... per cent shall be made from said fee for prompt payment.

IV. Upon a failure of the party of the second part to make returns or to make payment of license fees, as herein provided, for ..... days after the days herein named, the party of the first part may terminate this license by serving a written notice upon the party of the second part; but the party of the second part shall not thereby be discharged from any liability to the party of the first part for any license fees due at the time of the service of said notice.

In witness whereof the parties above named have hereunto set their hands the day and year first above written at ....., in the county of ....., and State of .....

In the presence of—

....

....

EXCLUSIVE LICENSE AGREEMENT WITH ROYALTY

This agreement, made this ..... day of ....., 19.., between ...., in the county of ....., and State of ....., party of the first part, and ...., of ....., in the county of ....., and State of ....., party of the second part, witnesseth, that whereas letters patent of the United States No. ....., for improvements in ....., were granted to the party of the first part on the ..... day of ....., 19..; and whereas the party of the second part is desirous of manufacturing ..... containing said patented improvements: Now, therefore, the parties have agreed as follows:

I. The party of the first part gives to the party of the second part the exclusive right to manufacture and sell the said patented improvements to the end of the term of said patent, subject to the conditions hereinafter named.

II. The party of the second part agrees to make full and true returns to the party of the first part, under oath, upon the first days of ..... and ....., in each year, of all ..... containing the patented improvements manufactured by them; and if the party of the first part shall not be satisfied in any respect with any such return, then shall the party of the first part have the right, either by himself or by his attorney, to examine any and all books of account of the said party of the second part concerning any items, charges, memoranda, or information relating to the manufacture or sale of said .....; and upon request made said party of the second part shall produce all such books for said examination.

III. The party of the second part agrees to pay to the party of the first part ..... dollars as a license fee upon every ..... manufactured by said party of the second part containing the patented improvements; provided, that if the said fee be paid upon the days provided herein for semiannual returns, or within ..... days thereafter, a discount of .... per cent shall be made from said fee for prompt payment.

IV. The party of the second part agrees to pay to the party of the first part at least ..... dollars, less discount, as said license fee upon each of the semiannual terms, even though they should not make enough of said patented ..... to amount to that sum at the regular royalty of ..... dollars each.

V. Upon the failure of the party of the second part to make returns or to make payment of license fees, as herein provided, for ..... days after the days herein named, the party of the first part may terminate this license by serving a written notice upon the party of the second part; but the party of the second part shall not thereby be discharged

from any liability to the party of the first part for any license fees due at the time of the service of said notice.

In witness whereof the parties above named have hereunto set their hands the day and year first above written at ....., in the county of ....., and State of .....

In the presence of—

....

....

AGREEMENT TRANSFERRING PATENTED INVENTIONS AND BUSINESS

This agreement, made this ..... day of ....., 19.., by and between ...., of ....., in the county of ....., and State of ....., first party, and ...., of ....., in the county of ....., and State of ....., second party, witnesseth that whereas first party warrants himself to be the owner, free and clear of any assignments, liens, encumbrances, contracts, licenses, understandings, diminutions of interest, or clouds of any name or nature, of certain inventions made by him pertaining to ....., and of the patent and application therefor hereinafter mentioned, and of the business that heretofore he has conducted in making and marketing such .....; and whereas first party now has pending certain litigation charging others to be unlawfully using one or more of the said inventions and infringing one or more of the said patents; and whereas second party desires to acquire first party's inventions, improvements, application, business, and rights of action and recovery pertaining to said .....;

I. Now, therefore, in consideration of the principal sum of ..... dollars to be paid unto first party as hereinafter provided, first party does hereby:

a. Sell, assign, and transfer unto second party (1) the entire right, title, and interest in and to all of his existing ..... inventions (hereinafter called "said inventions") and (2) his entire right, title, and interest in and to all other inventions and improvements in such ..... that he, solely or jointly with others, has conceived or shall hereafter conceive or perfect during the period ending ....., ..., 19.. (all hereinafter called "said improvements"), and (3) the entire right, title, and interest in and to patents, domestic and foreign, and rights to patents (all hereinafter called "said patents") for said inventions and improvements, including (without limitation of the foregoing generalities) his U. S. Patent No. ....., his pending application for U. S. Patent, Serial No. ....., and Canadian Letters Patent No. ....., granted ....., ..., 19...

b. Sell, assign, transfer, and set over unto second party (1) his ..... business, including good will, stock on hand and in process of manufacture, tools, dies, equipment, trade-marks, secret processes and formulae, customer lists, mailing lists, advertising cuts, and the paraphernalia of every name and nature especially pertinent to and used by him in his said ..... business together with (2) all choses in action, rights of action and recovery arising from or out of said inventions, patents, trade-marks, and business; *provided*, however, and it is mututally so understood, that first party shall not turn over unto second party properties used by him in whole or in part in the conduct of his ..... business nor yet any cash on hand or accounts receivable outstanding

in his ..... business; and *provided further*, and it is mutually so understood, that second party does not assume any accounts-payable, indebtedness, obligations, or other liabilities of any name or nature contracted or incurred by or on behalf of first party or in connection with his conduct of his ..... business; and

c. Agree that he will (1) promptly disclose, from time to time as the acts occur and on his own initiative unto ..... or other person or agent designated by second party, and said improvements that he may (prior to ....., ..., 19..) make or conceive, develop or perfect, solely or jointly with others; and (2) at second party's request promptly execute and deliver all lawful documents of, or in any way pertaining to, patent applications and prosecution thereof, assignments and bills of sale of things and of rights, and other lawful instruments that are by second party deemed necessary or desirable for the protection of said inventions and improvements throughout the world (to such extent as second party deems desirable) and to evidence second party's ownership of all matters and things hereunder conveyed or hereunder to be conveyed by first party unto second party; and (3) at second party's request promptly and diligently to assist second party in the ascertainment of facts and production of evidence that by second party may be deemed desirable or necessary for the conduct of any interference or litigation that in any way may touch or affect any of the matters or things of the said inventions or improvements or business; *provided*, however, and it is mutually so agreed, that expenses arising under the instant paragraph shall be borne by second party, that second party shall promptly reimburse first party for expenses reasonably incurred in the first instance by first party and all expenses incurred by first party on second party's request; and *provided further* that if second party should call upon first party for services or assistance involving any considerable expenditures of first party's time, first party shall be reimbursed for his time expenditures so made at second party's request at the rate of ..... dollars per day; and

d. Warrant that he has, before executing this instrument, directed his attorneys to take in his behalf and at his expense all steps necessary to dismiss all suits pending in which he is plaintiff touching said inventions and patents; it being understood and agreed that second party does not assume any expenses, costs, or liabilities arising out of or pertaining to any litigation heretofore instituted by or on behalf of first party; and

e. Agree to turn over to second party forthwith and without charge or expense all his patent files and data in his or his attorneys' hands, pertaining to said inventions, patents, or to suits or interferences touching same or his trade-marks or his ..... business.

f. Provided, however, and it is so agreed, that this contract is not intended to pass title to any inventions or patents other than such as relate to .....

II. In consideration of all the foregoing second party agrees to pay unto first party the principal sum of ..... dollars in amounts and times as follows:

a. Forthwith upon the signing of this agreement ..... dollars.

b. Monthly hereafter, beginning ....., ..., 19.., per respective non-interest-bearing notes herewith given by second party to first party, the successive sums of ..... dollars and a final payment of ..... dollars.

III. And it is mutually agreed that:

a. Should second party default in its payment of any note aforesaid first party may at his option upon ten (10) days' written notice of said default delivered at second party's principal place of business cancel this agreement, to take effect at the end of said notice period should second party fail during said notice period to make good its default, but this right of cancellation shall be alternative with, and not preclusive of, first party's right to maintain the agreement in force and sue in law or in equity for breach thereof or recovery thereunder; and

b. Should this agreement be cancelled under the next preceding paragraph (*a*) the instant paragraph (*b*) shall nevertheless remain in full force and effect, to wit, that second party shall and agrees to forthwith upon such cancellation reassign to first party in full all the property, rights, matters, and things assigned unto second party by first party under this agreement, and return to first party his patent files and data, and that first party shall retain to his own use and behoof all moneys theretofore received by him under this assignment and that second party's liability for any defaulted payments due before the effective date of cancellation shall not be abated; and

c. The expenses to be paid by second party under any of the terms hereof shall in no instance include legal services rendered to first party by first party's own counsel, but second party shall pay Government fees hereafter accruing, recording fees, and kindred items incurred in perfecting second party's rights under this agreement.

d. Time where herein stated is of the essence of the agreement, and

e. This agreement shall inure to the benefit of and be binding upon first party's legal representatives and assigns and second party's successors and assigns.

In testimony whereof the parties have hereunto subscribed as of the day and year first above written.

....
First Party

....
Second Party

By ....
Its President

Attest:

....
Secretary

ASSIGNMENT WITH AGREEMENT FOR MANUFACTURE AND SALE

IN CONSIDERATION of the sum of One Dollar and other good and valuable considerations, to me ..... in hand paid by ....., of ....., in the County of ....., and State of ....., the receipt of which I hereby acknowledge, I have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto said ....., his heirs, and assigns, an undivided one-half part of the entire right, title, and interest in and to an invention relating to ....., set forth and described in an application for the grant of Letters Patent of the United States, executed on the ..... day of ....., 192.., and an undivided one-half part of the entire right, title, and interest in and to any Letters Patent of the United States which may be granted for the said invention.

And I do hereby authorize and request the Commissioner of Patents of the United States to issue the Letters Patent which may be granted for said invention, in accordance with this statement.

The foregoing conveyance and assignment is made and accepted upon the express condition and mutual covenant that no assignment, encumbrance, license, or privilege affecting said invention or the title to the Letters Patent of the United States when granted and issued on said invention, shall be made or granted hereafter except by mutual consent in writing; that said invention is to be manufactured and sold as an article of merchandise in the United States, jointly by the parties hereto or in their joint interest and for their joint benefit; and that the profits in any manner derived from the sale or working of said invention in the United States, or from or on account of the Letters Patent of the United States which may be granted and issued therefor, shall be divided in the proportions of one-half thereof to said ..... and one-half thereof to said .....

IN WITNESS WHEREOF we have hereunto signed our names at ....., in the county of ....., and State of ....., this ..... day of ....., 192...

WITNESSES:

....

....

....

....

ASSIGNMENT OF RIGHT TO APPLY ABROAD

WHEREAS, ..., of ....., in the County of ....., and State of ....., did file on ....., a patent application in the United States on ....., the said application having Serial No. .....; and

WHEREAS, ..., of ....., in the County of ....., and State of ....., is desirous of applying for Letters Patent in France and in Belgium on the said invention;

THIS INDENTURE WITNESSETH, that for and in consideration of the sum of ....., paid to the said ..... by the said ....., the said ..... does hereby sell, assign, and transfer all rights in and to the said invention in and throughout France and Belgium to the said ....., his heirs, and assigns, and the said ..... does hereby authorize the said ..... to apply for said Letters Patent in France and in Belgium in his said name .....; the invention and the Letters Patent in France and in Belgium, to be held and enjoyed by the said ..... the same as the invention and the Letters Patent would have been held and enjoyed by the said ....., if this assignment had not been made, and the French and Belgian patent applications were filed in the said ..... name.

WITNESS my hand and seal this ..... day of .....

In presence of: .....

.....

State of .....
County of ..... } *ss:*

Be it known, that on this ..... day of ....., 19..., before me personally appeared the above-named ....., to me known and known to me to be the person mentioned in and who executed the foregoing instrument, and thereupon he duly acknowledged to me that he executed the same.

Witness my hand and official seal.

.....

ASSIGNMENT OF INVENTIONS MADE DURING PERIOD OF EMPLOYMENT

IN CONSIDERATION of the sum of ....., the receipt whereof by me is hereby acknowledged, and of my employment hereafter by ..... during such time as may be mutually agreeable to that company and myself, I hereby assign and agree to assign to said company, its successors, and assigns, all my rights to inventions which, during the period of my employment by said company or by its predecessor or successor in business, I have made or conceived or thereafter make or conceive, either solely or jointly with others, in the course of said employment or with the use of said company's time, material, or facilities, or relating to any subject matter with which my work for said company is or may be concerned:

AND I FURTHER agree, without charge to said company, but at its expense, to execute, acknowledge, and deliver all said further papers, including applications for patents, as may be necessary to obtain patents for said inventions in any and all cases and to vest title thereto in the ....., its successors, or assigns.

IN WITNESS WHEREOF, I have hereunto signed my name at ....., County of ....., and State of ....., this ..... day of ....., 19....

....

WITNESSES:

....

....

EMPLOYEE AGREEMENT COVERING INVENTIONS AND CONFIDENTIAL MATTER[1]

THIS AGREEMENT made the ..... day of ....., 19.., between .... and ....

WITNESSETH

I. Said party of the second part agrees to serve the company faithfully and to the best of his ability, under the direction of its officers, devoting his entire time, energy, and skill to the service of said company and the promoting of its interests, and to perform from time to time such work as said officers shall require, and at such places as they shall direct, said work shall be done and services performed in a manner reasonably satisfactory to said officers.

II. Said party of the second part, for the payments to be made to him as herein set forth, agrees to disclose and assign to the company, inventions made and conceived by him during the life of this contract, relating to the business of the ..... carried on or contemplated by the company, including those made or conceived by him between the time when he entered the employ of the company and the date of this agreement. Said inventions are to become and remain the property of the company, whether or not patent applications are filed therein, and said party of the second part agrees from time to time, upon request, at the expense of the company, to make application through the patent solicitors of the company, for Letters Patent in the United States and any foreign countries designated by the company, on the said inventions, and to assign all such applications to the company or its order, forthwith, and without charge for his services, beyond the payments herein provided, to give the company, its attorneys and solicitors, all reasonable assistance in preparing applications, drawings, claims, etc., and, from time to time, on request, to execute all papers, and to do all that may reasonably be required in order to protect the rights of the company and vest in it or its assigns the invention, application, and Letters Patent herein provided for. Time actually spent by the party of the second part at such work, at the request of the company, after the termination of the employment herein provided shall be paid for by the company at a reasonable rate. But no termination hereof shall release the party of the second part from his obligation under this contract as concerns any invention which by this contract he agrees to assign.

III. The party of the second part attaches hereto a list of patents and applications and unpatented inventions made before the execution of this agreement, which he desires to remove from the operation of this contract, and he covenants that this list is complete.

[1] The form of agreement here given is used by one of the largest employers of inventors in the United States.

IV. The party of the second part agrees not to disclose any confidential information obtained by him while in the employ of the company, to any third party without consent of an executive officer of the company, whether during or after his employment under this contract, and he further agrees, upon leaving the employ of the company not to take with him any drawing, blueprint, or other reproduction, or any confidential information.

V. The company agrees to pay the party of the second part $..... per month, and at this rate for any part of a month, while this contract is in force, which payment shall be in full for services and assignment of inventions to the company. This contract runs till the ..... day of ....., 19..., if said party of the second part continues in the employ of the company after the expiration of the term hereof, without written renewal, this contract shall have full force and effect from month to month, subject to cancellation by either party on thirty days' notice in writing to the other.

....

....

Acknowledgments.

Upon the back of the foregoing contract the following note is printed:

The men who are asked to sign this Agreement are men who, in the natural course of events, may be brought in touch with problems which are from time to time presented to the ————————————, for solution, and with efforts which are being made by various engineers attached to the company, to solve these problems. Without an Agreement to assign inventions along their line of work, it would be impossible to put men in touch with such work of the company, and to put them in free and open relation with engineers who are regularly assigning inventions to the company.

While this company holds out no promise of additional compensation, its policy is to recognize and reward merit, by adjustment of salaries and by advancement in opportunity and responsibility and otherwise, and inventive ability is recognized as an element of value, as executive ability, industry, etc., are recognized.

Inasmuch as the employee is to assign to the company his new inventions, made while with the company, then, for his own protection, a list of prior inventions is attached to his contract.

All confidential information which a man acquires in the service of the company, obviously, should, under no circumstances, be disclosed.

There is much information which it is doubtful whether it may, with propriety, be disclosed. The employee's judgment is probably the best guide as to such. The company, in many cases, is glad to have an employee use information which falls in the doubtful class, but permission should be obtained from the company.

EMPLOYEE'S INVENTION AGREEMENT[1]

WHEREAS, I am employed by ..... (hereinafter called the Company), a company affiliated with ..... Company, and it is a part of my duties to discover or invent, so far as I may be able, any new and useful art, machine, manufacture, composition of matter, method, process, or appliance, or any new and useful improvement thereof, which may in any way pertain to its business, or the business of said ..... Company, or that of any other subsidiary or affiliated company, association or limited partnership of said ..... Company, and in so doing I may have the use of such laboratories, machinery, appliances, and material as the Company may have, and the help of its other employees, and be aided by the skill, knowledge, experience, and advice of its officers and other employees, and my investigations, tests, and experiments will be made at its expense, and part of my salary will be for making such discoveries or inventions:

NOW IN CONSIDERATION OF THE PREMISES and the sum of One ($1.00) Dollar to me in hand paid by each of such companies, the receipt whereof is hereby acknowledged, I hereby grant to the Company and to the said ..... Company and to all other subsidiary and affiliated companies, associations, and limited partnerships of said ..... Company, without charge therefor and without limit as to time or extent, the right (hereinafter called "shop rights") to use, in the business of each, any and all new and useful arts, machines, manufactures, compositions of matter, methods, processes, and appliances, and any and all new and useful improvements thereof, which I may discover or invent while in the employ of the Company, either during or outside of my regular hours of employment, and any and all United States and/or foreign patents for any such discovery or invention or improvements thereon, which may be obtained by me at any time.

In addition to and not in diminution of the foregoing, I agree:

1. That immediately before applying for any such patent, I will furnish the Company with a duplicate of my application and all its exhibits and the Company shall have the exclusive right or option of purchasing three-fourths of any such patent for no further consideration than its reimbursing me for the expense of securing the same. If the Company, for six months after I notify it in writing that any such patent has issued to me, neglects to exercise its right so to purchase such three-fourths, its right to purchase same hereunder shall thereupon end.

2. That the Company shall have the exclusive right or option of purchasing the remaining one-fourth of any such patent for such price as we may agree upon, or if we cannot agree then for such price as may

[1] A large oil company uses the form here given.

be named by three arbitrators, one to be chosen by the Company, one by myself, and the third by the two so chosen, to whom the patent shall be submitted forthwith for valuation of such one-fourth, the value of the shop rights not to be included therein, and the value fixed by the arbitrators or any two of them shall be the price which the Company shall pay me for such one-fourth of any such patent. If the Company for six months after I notify it in writing that any such patent has issued to me or for six months after the arbitrators fix the price (if the price be submitted to arbitration) neglects to exercise its right so to purchase such one-fourth, its right to purchase same hereunder shall thereupon end.

3. That I will apply for and take all necessary steps to secure, at the expense and direction of the Company, any and all United States and/or foreign patents as the Company may request and, upon the issuance to me of any such patent, will notify the Company immediately in writing to that effect.

4. That I will not transfer any of my interest in any such invention, discovery, or patent, or grant any license, or make any manufacture or sale or use thereunder, without the prior written consent of the Company, so long as the Company has any rights hereunder which it has not exercised, or, after the Company has by the exercise of such rights, acquired any ownership therein.

5. That I will sign, execute, acknowledge, and deliver to the Company or its nominee any and all further contracts, assignments, and written instruments deemed necessary by the Company to carry out the full intent and meaning of this instrument, the expense thereof to be borne by it.

6. That I will not, either before or after leaving the employ of the Company, divulge to any third party any information, confidential or otherwise, obtained by me while in the Company's employ, and upon leaving its employ that I will not take with me any drawing, blueprint, yield statement showing chemical or physical results, or any other confidential data whatsoever.

7. That this instrument and all its provisions shall inure to the benefit of the Company, the said ..... Company, and all other subsidiary and affiliated companies, associations, and limited partnerships of said ..... Company, their respective successors and assigns, and shall be binding upon me, my heirs, executors, administrators, and assigns.

Dated this ..... day of ....., 19...

.... [SEAL]

Signed, sealed, and delivered in presence of

....

State of .....
County of ..... } *ss:*

BE IT REMEMBERED that on this ..... day of ....., in the year of our Lord one thousand nine hundred and ....., before

me, a Notary Public in and for the said county and state, personally appeared ....., with whom I am personally acquainted and who I am satisfied is the grantor or party signing the within instrument, and the contents thereof having been first made fully known to him, he did thereupon acknowledge to me that he did sign, seal, execute, and deliver the same as his free and voluntary act and deed, for the uses and purposes therein expressed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year last above written.

My commission expires .....

....
Notary Public

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